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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This paper describes and documents an improved version of the optimal sortie allocation model (OPTSA) previously presented in IDA Papers P-992 and P-993, published in December 1973. OPTSA is a model for computing allocations of general purpose aircraft to combat air support, airbase attack, and intercept missions. The mathematical problem is a two-side, zero-sum, multi-stage game with		

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20. continued

simultaneous moves at each stage. The revised OPTSA model includes a substantially improved game-solving procedure and a more detailed simulation of warfare between the opposing sides.

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REVISED OPTSA MODEL
Volume 3: The OPTSA Print-Run Program

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INSTITUTE FOR DEFENSE ANALYSES
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Chapter I

PRINT-RUN PROGRAM DESCRIPTION

A. PURPOSE OF THE PROGRAM

This volume describes a program designed expressly to be used in conjunction with the OPTSA model. Its purpose is to take allocations of Blue and Red general-purpose aircraft to the three missions (CAS, ABA, and INT) for each decision period in the war, and run them through the OPTSA assessment routine to determine and to print out a variety of quantities (e.g., number of aircraft and sorties of various kinds destroyed on each day by various means, values of the various MOEs on all intermediate days of the war, and levels of aircraft shelters and ground divisions on all intermediate days of the war). This new program is referred to as the "print-run" program; the regular OPTSA model is called the "game" program.

The game program takes certain inputs and a given measure of effectiveness and finds optimal strategies for allocation of Blue and Red aircraft--which involves taking a large number of different Blue/Red allocation-choice pairs and running each pair through the assessment routine to determine a payoff in the specified MOE. In the assessment routine, many quantities are computed but not stored. The variables holding these quantities are usually written over with new information. The print-run program outputs some of them.

If a pure strategy is optimal, the print-run program can be used to take the optimal strategy produced by the game program and run it back through the assessment routine to show exactly what will go on over the course of the war if the

optimal strategy is played. It will show the values of some of the MOEs that were not optimized. The print-run program does not accept randomized strategies as such, but each realization of a randomized strategy can be run separately.

This description of the OPTSA print-run program is not detailed. The program is intended to be used by a person familiar with the main OPTSA model and Volumes 1 and 2 of this paper.

B. THE COMPUTER PROGRAM

The computer program is operational on the CDC 6400 at IDA. It occupies 51,000 octal (equivalent to 21,000 decimal) 60-bit words of core, contains about 1,900 FORTRAN statements, and requires about 50 seconds to compile. The execution time for a 30-day war is about five seconds. Unlike the game program, it is very short because only one allocation combination is assessed--not thousands. The core usage is smaller because the strategy arrays have been deleted.

1. Program Structure and Segments

For a description of the game-program structure, the reader is referred to Volume 2, Chapter I. The overall structure of the print-run program is very similar--except that the game-solving subroutines and game and strategy arrays have been removed, print commands have been added to the assessment routine, and a printing subroutine has been added. The result is a main program and six subroutines. The names of the subroutines remain the same; several of the subroutines are, in fact, *exactly* the same as the corresponding ones in the game program. There are still two COMMON blocks; blank COMMON contains the same variables as in the game program except for the arrays of payoff game values and strategies, and COMMON block CAMVAR remains exactly the same as before. Instead of

calling a game-solving subroutine, the main program reads the allocations of Blue and Red aircraft for each period and calls the assessment routine. The assessment routine remains exactly the same, but commands have been inserted to print out variables as they are computed. The two premature stops caused by excessive iterations of Newton's method remain, though the other premature stop (caused by too small a game value added) is of course no longer applicable. Finally, a subroutine called PRINTS has been added. After the assessment has been performed for all days in the war, PRINTS is called. It prints all the variables that are arrays, indexed by day of the war that are stored in blank COMMON--including division inventory, divisions destroyed, aircraft inventory (by type), aircraft destroyed, shelters destroyed, FEBA position, and other variables.

Table 1 lists the segments of the print-run program, in order, with the function of each.

Table 1. SEGMENTS OF THE PRINT-RUN COMPUTER PROGRAM

Segment	Function
Program MAIN	Main Program calls CLRCOM and READ, sets extent of periods in war; then reads and prints Blue and Red aircraft allocations and calls CAM.
Subroutine CLRCOM()	Initializes certain variables in blank COMMON to zero--exactly the same as in the game program.
Subroutine READ	Reads and prints the input data, except for the aircraft allocations--exactly the same as in the game program.
Subroutine CAM()	Performs assessment and prints out various intermediate variables as they are computed.
Subroutine CVFX()	Performs interpolations for use in CAM--exactly the same as in the game program.
Subroutine CAMCLR	Each day, initializes certain variables in CAM to zero--exactly the same as in the game program.
Subroutine PRINTS	Prints certain arrays in blank COMMON, for all days in the war.

2. Input

The print-run program is designed to accept the input deck to the regular game program (described in detail in Vol. 2, Ch. II), with four additional cards for the aircraft allocation at the end. Variable definitions remain unchanged. The sole difference is that variables $\text{PROPB}(3,3)$ and $\text{PROPR}(3,3)$ --the
MS,IPD MS,IPD

proportions of Blue or Red GP aircraft assigned to mission MS in period IPD--are input (not computed) variables. They are input on four cards, as follows:

- Card 1: $\text{PROPB}(\text{MS},1), \text{MS}=1,3$. Three entries giving the proportion of Blue GP aircraft to CAS, ABA, and INT (resp.) in period 1.
- Card 2: $\text{PROPB}(\text{MS},\text{IPD}), \text{MS}=1,3, \text{IPD}=2,3$. Six entries--the first three giving the Blue proportions to CAS, ABA, and INT for period 2; the second three for period 3.
- Card 3: $\text{PROPR}(\text{MS},1), \text{MS}=1,3$ --like Card 1, but for Red.
- Card 4: $\text{PROPR}(\text{MS},\text{IPD}), \text{MS}=1,3, \text{IPD}=2,3$ --like Card 2, but for Red.

Each entry occupies a field that is 10 characters wide. The input format is 8F10.3. A two-period war is considered as the last two periods of a three-period war; hence, the desired allocations are input on cards 2 and 4 only, though four cards must still be input.

3. Output

The output of the print-run program is in three parts. First, the input variables are output (exactly as in Vol. 2, Ch. V, Sec. B) followed by the aircraft allocation. Second, variables that give intermediate results (e.g., aircraft levels, by type and mission; aircraft killed, by type and mission; average detection and kill parameters; etc., that are recomputed each day) are printed as they are computed. The print commands for these have been inserted into game-program subroutine CAM. The variables printed are listed in Figure 1 (and defined in

<p><u>Blue Sorties and Aircraft at Beginning of Day (ID)</u></p> <p>BS(TY,MS) BA(TY,MS) BANAS BANF(TY,MS)</p> <p><u>Red Sorties and Aircraft at Beginning of Day (ID)</u></p> <p>RS(TY,MS) RA(TY,MS) RANAS RANF(TY,MS)</p> <p><u>Attrition to Blue in Air-to-Air Interaction</u></p> <p>IBIRA,IBARI RATS,RATSI BITS,BITSI VRIDBA(2) VRADBI(4) BSENG(TY,MS) (MS=1,2--attack missions only) DENOM BPENG(2) BSKAA(TY,MS) BAKAA(TY,MS) BSFB(TY,MS) BAFB(TY,MS) BS(TY,MS)} BA(TY,MS)} (After air-to-air losses are subtracted out)</p>	<p><u>Attrition to Red in Air-to-Air Interaction</u></p> <p>BATS,BATSI RITS,RITSI VBIDRA(2) VBADRI(4) RSENG(TY,MS) (MS=1,2--attack missions only) DENOM RPENG(2) RSKAA(TY,MS) RAKAA(TY,MS) RSFB(TY,MS) RS(TY,MS)} RA(TY,MS)} (After air-to-air losses are subtracted out)</p> <p><u>Blue Losses to Enemy SAMs</u></p> <p>BSL(TY,MS) BAL(TY,MS) BS(TY,MS)} BA(TY,MS)} (After losses are subtracted out)</p> <p><u>Red Losses to Enemy SAMs</u></p> <p>RSL(TY,MS) RAL(TY,MS) RS(TY,MS)} RA(TY,MS)} (After losses are subtracted out)</p> <p>(concluded on next page)</p>
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*Variables are listed in the order output, which is very close to the order they are computed in the program; one line of the figure corresponds to one line of output.

Variable definitions appear in Vol. 2, Ch. III, Sec. F, and are listed alphabetically in the appendix to Vol. 2.

The indexing variable TY is declared integer.

Most dimensioned variables for the ABA interaction are indexed by (TY,MS), aircraft type and mission; they are printed six to a line, in the following order: GP-CAS, GP-ABA, GP-INT, SP-CAS, SP-ABA, and SP-INT.

Many dimensioned variables for the ABA interaction are indexed by kind of aircraft (KBA or KRA); they are printed four to a line, in the following order: GP, SP-CAS, SP-ABA, and SP-INT.

ID, the day of the war, appears at the left-hand side of each line.

Some variables in the air-to-air interaction might be inactive, depending on the method used to compute attritions; they are printed anyway.

In the ABA interaction, only those variables encountered in the particular attack mode chosen are printed.

A sample output of the variables (in the order listed in this figure) appears as Sec. B of Ch. III (below).

Figure 1. VARIABLES IN CAM THAT ARE OUTPUT*

<p><u>Blue Airbase--Blue Losses Caused by Red Attack Mode (IRABA)</u></p> <p>BAVUL (KBA) ABQRA, ABQRA, BSHEL, BSHEL1 BAVUL, ABQRA, BSHEL1 BPOPS (KBA) BPOPS (KBA) BPOPS (KBA) BTOTS, BTOTNS, BTOT PRABA (2), RATP VRDBS, VRKBS, VRDBNS, VRKBNS</p> <p>(When QRA are added in)</p> <p><u>Red Attack Mode 1:</u> TERMS1, TERMS2, TERMN1, TERMN2 BAKS, BSHELK(ID), BAKNS</p> <p><u>Red Attack Mode 2:</u> IB2EX CSO, CS1, CS CNO, CN1, CN C1, QO, Q, CS2 BAKS, BSHELK(ID), BAKNS</p> <p>(Not printed if IB2EX=21) (Not printed if IB2EX=22) (Not printed if IB2EX=21 or 22)</p> <p><u>Red Attack Mode 3:</u> T, TERM1, TERM2, TERMS, TERMNS BAKS, BSHELK(ID), BAKNS</p> <p><u>Red Attack Mode 4:</u> B4AN, B4AS, B4NS, B4SN X4N, X4NS, X4SN, X4S X4N, X4NS, X4SN, X4S A1N, A1S, A2N, A2S, A2, A3, A4, A5, A6 IB4EX NTN, Q TERMS, TERMNS BAKS, BSHELK(ID), BAKNS</p> <p>(After these variables have been forced to be between 0 and 1) (Only if IB4EX=30) (Printed twice if IB4EX=30)</p> <p><u>If Very Few or No Blue Aircraft or Red Attackers:</u> IB4EX BAKS, BSHELK(ID), BAKNS</p> <p>(At value 40) (All at value zero)</p>	<p><u>Red Airbase--Red Losses Caused by Blue Attack Mode (IBABA)</u></p> <p>RAVUL (KRA) ARQRA, ARQRA, RSHEL, RSHEL1 RAVUL, ARQRA, RSHEL1 RPOPS (KRA) RPOPS (KRA) RPOPS (KRA) RTOTS, RTOTNS, RTOT PBABA (2), BATP VBDRS, VBKRS, VBDRNS, VBKRNS</p> <p>(When QRA are added in)</p> <p><u>Blue Attack Mode 1:</u> TERMS1, TERMS2, TERMN1, TERMN2 RAKS, RSHELK(ID), RAKNS</p> <p><u>Blue Attack Mode 2:</u> IR2EX CSO, CS1, CS CNO, CN1, CN C1, QO, Q, CS2 RAKS, RSHELK(ID), RAKNS</p> <p>(Not printed if IR2EX=21) (Not printed if IR2EX=22) (Not printed if IR2EX=21 or 22)</p> <p><u>Blue Attack Mode 3:</u> T, TERM1, TERM2, TERMS, TERMNS RAKS, RSHELK(ID), RAKNS</p> <p><u>Blue Attack Mode 4:</u> R4AN, R4AS, R4NS, R4SN X4N, X4NS, X4SN, X4S X4N, X4NS, X4SN, X4S A1N, A1S, A2N, A2S, A2, A3, A4, A5, A6 IR4EX NTN, Q TERMS, TERMNS RAKS, RSHELK(ID), RAKNS</p> <p>(After these variables have been forced to be between 0 and 1) (Only if IR4EX=30) (Printed twice if IR4EX=30)</p> <p><u>If Very Few or No Red Aircraft or Blue Attackers:</u> IR4EX RAKS, RSHELK(ID), RAKNS</p> <p>(At value 40) (All at value zero)</p> <p><u>Total Aircraft Destruction for Day (ID)</u> BTOTS, BTOTNS, BTOT XS, XNS BAD (KBA) RTOTS, RTOTNS, RTOT XS, XNS RAD (KRA)</p> <p>(Redefined for Red)</p>
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Figure 1 (concluded)

Vol. 2, Ch. III, Sec. F). Third, variables that have a day index are printed for all days in the war. A history of a desired variable over the course of the war can thus be found. These variables are stored in blank COMMON and are printed out by subroutine PRINTS after the assessment routine has been fought for the whole length of the war. Figure 2 lists these variables in the order that they are printed out. This section of output is preceded by a second printing of the aircraft allocations.

In the second part of the output, four working variables have been put into subroutine CAM in ABA modes 2 and 4 to show the outcome of the internal optimization used to determine the proportion of attack passes to attack sheltered aircraft. These variables are explained in Table 2. Variables IB4EX and IR4EX are also used if the check on total aircraft to be attacked is active, regardless of attack mode.

Sample output appears in Chapter III of this volume (below). The program listing clarifies the exact sequence of output.

Variable and Array Indices	Brief Description	Variable and Array Indices	Brief Description
BDA(1, ID) BDA(2, ID) BDA(3, ID) BDI(1, ID) BDI(2, ID) BDI(3, ID) BDD(1, ID) BDD(2, ID) BDD(3, ID) BGF(ID) BAA(1, ID) BAA(2, ID) BAA(3, ID) BAA(4, ID) BAI(1, ID) BAI(2, ID) BAI(3, ID) BAI(4, ID) BAD(1, ID) BAD(2, ID) BAD(3, ID) BAD(4, ID) SHELK(ID) BSHELK(ID) BAF(ID) BF(ID)	Blue type-1 divisions added Blue type-2 divisions added Blue type-3 divisions added Blue type-1 division inventory Blue type-2 division inventory Blue type-3 division inventory Blue type-1 divisions destroyed Blue type-2 divisions destroyed Blue type-3 divisions destroyed Blue ground firepower delivered Blue type-1 aircraft added Blue type-2 aircraft added Blue type-3 aircraft added Blue type-4 aircraft added Blue type-1 aircraft inventory Blue type-2 aircraft inventory Blue type-3 aircraft inventory Blue type-4 aircraft inventory Blue type-1 aircraft destroyed Blue type-2 aircraft destroyed Blue type-3 aircraft destroyed Blue type-4 aircraft destroyed Blue shelter inventory Blue shelters destroyed Blue air firepower delivered Blue total firepower delivered	RDA(1, ID) RDA(2, ID) RDA(3, ID) RDI(1, ID) RDI(2, ID) RDI(3, ID) RDD(1, ID) RDD(2, ID) RDD(3, ID) RGF(ID) RAA(1, ID) RAA(2, ID) RAA(3, ID) RAA(4, ID) RAI(1, ID) RAI(2, ID) RAI(3, ID) RAI(4, ID) RAD(1, ID) RAD(2, ID) RAD(3, ID) RAD(4, ID) SHELK(ID) RSHELK(ID) RAF(ID) RF(ID) FEBA(ID) CBF(ID) CRF(ID) CBAF(ID) CRAF(ID)	Red type-1 divisions added Red type-2 divisions added Red type-3 divisions added Red type-1 division inventory Red type-2 division inventory Red type-3 division inventory Red type-1 divisions destroyed Red type-2 divisions destroyed Red type-3 divisions destroyed Red ground firepower delivered Red type-1 aircraft added Red type-2 aircraft added Red type-3 aircraft added Red type-4 aircraft added Red type-1 aircraft inventory Red type-2 aircraft inventory Red type-3 aircraft inventory Red type-4 aircraft inventory Red type-1 aircraft destroyed Red type-2 aircraft destroyed Red type-3 aircraft destroyed Red type-4 aircraft destroyed Red shelter inventory Red shelters destroyed Red air firepower delivered Red total firepower delivered FEBA position Cumulative Blue total firepower delivered Cumulative Red total firepower delivered Cumulative Blue air firepower delivered Cumulative Red air firepower delivered

*Variables are listed in the order output, which is not the same order as they are computed in the program.
 More detailed definitions appear in Vol. 1, Ch. III.
 Each variable is output for all days in the war, before the next variable is started; ID is the day index.
 If certain variables are not used (e.g., special-purpose aircraft), they are still output--as zero.

Figure 2. VARIABLES IN BLANK COMMON THAT ARE OUTPUT*

Table 2. NEW WORKING VARIABLES IN SUBROUTINE CAM

Variable Name	Place Appearing in Subroutine CAM	Value	Meaning
IB2EX	ABA of Blue Air-bases, Red Attack Mode 2	11	Since a few Red attackers can kill all the Blue sheltered aircraft, assign 0.9999 of them to attack Blue nonsheltered aircraft.
		12	Since a few Red attackers can kill all the Blue nonsheltered aircraft, assign 0.9999 of them to attack Blue shelters.
		20	Perform the optimization to determine proportion of Red passes to attack Blue shelters.
		21	Very few or no Blue sheltered aircraft; hence, Red attacks nonsheltered aircraft only.
		22	Very few or no Blue nonsheltered aircraft; hence, Red attacks shelters only.
IB4EX	ABA of Blue air-bases, Red Attack Mode 4	11	Very few or no Blue sheltered aircraft; hence, Red attacks only nonsheltered aircraft.
		12	Very few or no Blue nonsheltered aircraft; hence, Red attacks only shelters.
		21	Attrition function derivatives indicate that proper Red policy is to attack Blue nonsheltered aircraft only.
		22	Attrition function derivatives indicate that proper Red policy is to attack Blue shelters only.
		30	Internal optimization is performed to determine proportion of Red passes to attack Blue shelters.
IR2EX	ABA of Red air-bases, Blue Attack Mode 2	--	(Like IB2EX, <i>mutatis mutandis</i> .)
IR4EX	ABA of Red air-bases, Blue Attack Mode 4	--	(Like IB4EX, <i>mutatis mutandis</i> , including the value 40.)

Chapter II

COMPUTER PROGRAM LISTING

A. PROGRAM MAIN

PROGRAM MAIN(INPUT,OUTPUT,TAPE5=INPUT,TAPE6=OUTPUT)	MAIN	00002
C OPTSA II	MAIN	00003
C PROGRAM TO PRINT DAILY RESULTS FROM AN INPUT STRATEGY PAIR	MAIN	00004
CDUPBEG	MAIN	00005
COMMON NKBD,NKMD,NKBA,NKRA	MAIN	00006
COMMON NID	MAIN	00007
COMMON NPD,IDL1,IDU1,IDL2,IDU2,IDL3,IDU3	MAIN	00008
COMMON IRO,JRO,KRO	MAIN	00009
COMMON IPRV,IPRU	MAIN	00010
COMMON IREPLB,IREFLR	MAIN	00011
COMMON BDA(3,90),RDA(3,90)	MAIN	00012
COMMON BAA(4,90),RAA(4,90)	MAIN	00013
COMMON DBQRA,DMURA	MAIN	00014
COMMON SHEL(90),SHELK(90),PBSHEL,PRSHEL	MAIN	00015
COMMON BSHELK(90),RSHELK(90)	MAIN	00016
COMMON FBD(3),FBD(3),FBA(2),FRA(2)	MAIN	00017
COMMON IDSRC,IDSRC	MAIN	00018
COMMON SORRB1(2,3),SORRB2(2,3),SORRR1(2,3),SORRR2(2,3)	MAIN	00019
COMMON IAA,XNBAA,XNRAA,BALPHA(2,2),RALPHA(2,2)	MAIN	00020
COMMON BIDRA(2,4),BADRI(4,2),RIDBA(2,4),RADBI(4,2)	MAIN	00021
COMMON BIKRA(2,4),BAKRI(4,2),RIKBA(2,4),RAKBI(4,2)	MAIN	00022
COMMON BSAMZB(2,2),RSAMZB(2,2)	MAIN	00023
COMMON IRSSH,BFRAC1,BFRAC2,RFRAC1,RFRAC2,FBSK,FRSK	MAIN	00024
COMMON HPASS(2),RPASS(2)	MAIN	00025
COMMON IBABA,IMABA,XNBAB,XNRAB,HPARK,RPARK	MAIN	00026
COMMON BDRS(2),BDRNS(2),BKRS(2),BKRNS(2)	MAIN	00027
COMMON RDBS(2),RDBNS(2),RKBS(2),RKBN(2)	MAIN	00028
COMMON B4B,B4AL,B4AN1,B4AN2,B4AS1,B4AS2,B4NS1,B4NS2,B4SN1,B4SN2	MAIN	00029
COMMON R4B,R4AL,R4AN1,R4AN2,R4AS1,R4AS2,R4NS1,R4NS2,R4SN1,R4SN2	MAIN	00030
COMMON EPS4	MAIN	00031
COMMON NFRFA,FRFA(15),FA(15)	MAIN	00032
COMMON NFRBD,FRBD(15),BD(15)	MAIN	00033
COMMON NFRRD,FRRD(15),RD(15)	MAIN	00034
COMMON NB,NR	MAIN	00035
COMMON PB(20,3),PR(20,3)	MAIN	00036
COMMON PROPB(3,3),PROPR(3,3)	MAIN	00037
COMMON MOE,MOE1	MAIN	00038
COMMON BCWGT,B5WGT(3),BQWGT(2),HCWGT,RSWGT(3),RQWGT(2)	MAIN	00039
COMMON GVA	MAIN	00040
C	MAIN	00041
COMMON BDI(3,90),RDI(3,90)	MAIN	00042
COMMON BDD(3,90),MOD(3,90)	MAIN	00043
COMMON BGF(90),RGF(90)	MAIN	00044
COMMON BAI(4,90),RAI(4,90)	MAIN	00045
COMMON BAD(4,90),RAD(4,90)	MAIN	00046
COMMON BAF(90),RAF(90)	MAIN	00047
COMMON BF(90),RF(90)	MAIN	00048
COMMON FEBA(90)	MAIN	00049
COMMON CBF(90),CRF(90)	MAIN	00050
COMMON CBAF(90),CRAF(90)	MAIN	00051
C	MAIN	00052
CDUPEND	MAIN	00053
CALL CLRCOM(1,1,90)	MAIN	00054
CALL READ	MAIN	00055
IDL1=1	MAIN	00056
IDU1=IDL2-1	MAIN	00057
IDU2=IDL3-1	MAIN	00058

C	IDU3=NID	MAIN	00059
C	ITERATION LOOP CAN GO HERE	MAIN	00060
C		MAIN	00061
	READ 55,((PROPB(MS,IPD),MS=1,3),IPD=1,1)	MAIN	00062
	READ 55,((PROPB(MS,IPD),MS=1,3),IPD=2,3)	MAIN	00063
	READ 55,((PROPB(MS,IPD),MS=1,3),IPD=1,1)	MAIN	00064
	READ 55,((PROPB(MS,IPD),MS=1,3),IPD=2,3)	MAIN	00065
	55 FORMAT(8F10,3)	MAIN	00066
	MOT=6	MAIN	00067
	WRITE(MOT,156)	MAIN	00068
156	FORMAT(1H1,20HSTRATEGIES,BY PERIOD /1H,15X,10H BLUE,30X,	MAIN	00069
1	6H RED /1H,30H CAS ABA INT,10X,	MAIN	00070
2	30H CAS ABA INT)	MAIN	00071
	DO 57 IPD=1,3	MAIN	00072
	WRITE(MOT,56) IPD, (PROPB(MS,IPD),MS=1,3), (PROPR(MS,IPD),MS=1,3)	MAIN	00073
56	FORMAT(1H,12,3F10,4,10X,3F10,4)	MAIN	00074
57	CONTINUE	MAIN	00075
	WRITE(MOT,1)	MAIN	00076
1	FORMAT(1H1/)	MAIN	00077
	CALL CAM(1,NIU)	MAIN	00078
9	CONTINUE	MAIN	00079
C		MAIN	00080
C	ITERATION LOOP CAN GO HERE	MAIN	00081
C		MAIN	00082
C		MAIN	00083
	9999 CONTINUE	MAIN	00084
	END	MAIN	00085
		MAIN	00086

B. SUBROUTINE CLRCOM

Subroutine CLRCOM is the same as in the game program (a listing appears in Vol. 2, Ch. IV, Sec. B).

C. SUBROUTINE READ

Subroutine READ is the same as in the game program (a listing appears in Vol. 2, Ch. IV, Sec. C).

D. SUBROUTINE CAM

SUBROUTINE CAM(IDL,IOU)	CAM	00002
C OPTSA 11	CAM	00003
C PRINTS DAILY RESULTS FROM AN INPUT STRATEGY PAIR	CAM	00004
COUPODIM		
COMMON NKBU,NKBU,NKBA,NKBA	MAIN	
COMMON NIU	MAIN	
COMMON NPU,IDL1,IOU1,IDL2,IOU2,IDL3,IOU3	MAIN	
COMMON IRL,JRU,KRU	MAIN	
COMMON IPKV,IPKV	MAIN	
COMMON IREPLR,IREPLR	MAIN	
COMMON BDA(3,90),BDA(3,90)	MAIN	
COMMON BAA(4,90),BAA(4,90)	MAIN	
COMMON UBURA,UBURA	MAIN	
COMMON SHEL(90),SHEL(90),PSHEL,PSHEL	MAIN	
COMMON BSHELK(90),BSHELK(90)	MAIN	
COMMON FBU(3),FBL(3),FBA(2),FBA(2)	MAIN	
COMMON IDBMC,IOHMC	MAIN	
COMMON SORR1(2,3),SORR2(2,3),SORR1(2,3),SORR2(2,3)	MAIN	
COMMON IAA,XNDAA,XNDAA,BALPHA(2,2),BALPHA(2,2)	MAIN	
COMMON BILUA(2,4),BILUA(4,2),MILUA(2,4),MILUA(4,2)	MAIN	
COMMON BILUA(2,4),BILUA(4,2),MILUA(2,4),MILUA(4,2)	MAIN	
COMMON BSANZ(2,2),BSANZ(2,2)	MAIN	
COMMON IN3DH,DFMAC1,DFMAC2,REFAC1,REFAC2,FDCK,FCK	MAIN	
COMMON BPASS(2),BPASS(2)	MAIN	
COMMON IBABA,IBABA,XNDAB,XNDAB,BPAB,BPAB	MAIN	
COMMON BDKS(2),BDKS(2),BDKS(2),BDKS(2)	MAIN	
COMMON KUBS(2),KUBS(2),KUBS(2),KUBS(2)	MAIN	
COMMON B4B,B4B,B4AN1,B4AN2,B4AS1,B4AS2,B4NS1,B4NS2	MAIN	
COMMON K4B,K4B,B4AN1,B4AN2,K4AS1,K4AS2,K4NS1,K4NS2	MAIN	
COMMON EPS	MAIN	
COMMON NFKPA,NFKPA(15),FA(15)	MAIN	
COMMON NFKPU,NFKPU(15),BU(15)	MAIN	
COMMON NFKRU,NFKRU(15),RD(15)	MAIN	
COMMON NFKRU	MAIN	
COMMON PB(20,3),PB(20,3)	MAIN	
COMMON PROPB(3,3),PROPB(3,3)	MAIN	
COMMON MOE,MOE1	MAIN	
COMMON BCGU1,BCGU1(2),HCGU1(2),HCGU1(3),HCGU1(2)	MAIN	
COMMON GVA	MAIN	
C	MAIN	
COMMON BUI(3,90),BUI(3,90)	MAIN	
COMMON BDU(3,90),BDU(3,90)	MAIN	
COMMON BGF(90),BGF(90)	MAIN	
COMMON BAI(4,90),BAI(4,90)	MAIN	
COMMON BAI(4,90),BAI(4,90)	MAIN	
COMMON BAF(90),BAF(90)	MAIN	
COMMON BF(90),BF(90)	MAIN	
COMMON FEB(90)	MAIN	
COMMON CHF(90),CHF(90)	MAIN	
COMMON CHF(90),CHF(90)	MAIN	
C	MAIN	
COUPODIM	CAM	00005
C	CAM	00006
COMMON/CAMV4/ SURR(2,3),SURR(2,3)	CAM	00007
COMMON/CAMV4/ BA(2,3),BA(2,3),BS(2,3),BS(2,3)	CAM	00008
COMMON/CAMV4/ BAKAA(2,3),BAKAA(2,3),BSKAA(2,3),BSKAA(2,3)	CAM	00009
COMMON/CAMV4/ BAL(2,3),BAL(2,3),BSL(2,3),BSL(2,3)	CAM	00010

COMMON/CAMVAR/	VBIIDRA(2),VBADRI(4),VRIDRA(2),VRADHI(4)	CAM	00011
COMMON/CAMVAR/	BSENG(2,2),RSENG(2,2)	CAM	00012
COMMON/CAMVAR/	BPENG(2),RPENG(2)	CAM	00013
COMMON/CAMVAR/	BSFB(2,3),RAFB(2,3),RSFB(2,3),RAFB(2,3)	CAM	00014
COMMON/CAMVAR/	BAVUL(4),RAVUL(4),PRABA(2),PKARA(2)	CAM	00015
COMMON/CAMVAR/	BPOPS(4),BPOPS(4),RPOPS(4),RPOPS(4)	CAM	00016
COMMON/CAMVAR/	VHORS,VBDHNS,VBKRS,VBKRS	CAM	00017
COMMON/CAMVAR/	VHORS,VBDHNS,VBKRS,VBKRS	CAM	00018
INTEGER	TY,TYR,TYR	CAM	00019
DIMENSION	BANF(2,3),RANF(2,3)	CAM	00020
DIMENSION	L(105,5)	CAM	00021
C	THESE DATA STATEMENTS CONTAIN VARIABLE NAMES TO BE PRINTED ON THE	CAM	00022
C	APPROPRIATE LINE	CAM	00023
C	DATA FRAGMENT 1	CAM	00024
DATA(L(I),I=	1,105)/ 4HBS(T,4HBA(T,4HRANA,4HBAF,4HRS(T,4HRA(T,	CAM	00025
44HRANA,4HBAF,4HBIIR,4HRATS,4HBITS,4HVID,4HVRAD,4HBSN,4HDENO,		CAM	00026
44HBPEN,4HBSKA,4HBAKA,4HRSFB,4HBAFB,4HBS(T,4HBA(T,4HBATS,4HRITS,		CAM	00027
44HVBID,4HVBAD,4HRSN,4HDENO,4HRPEN,4HRSKA,4HBAKA,4HRSFB,4HBAFB,		CAM	00028
44HRS(T,4HRA(T,4HBSL(,4HBAL(,4HBS(T,4HBA(T,4HBSL(,4HRA(,4HRS(T,		CAM	00029
44HRA(T,4HBAVU,4HBAVU,4HBPPOP,4HBPPOP,4HBPPOP,4HBTUT,4HPRAB,		CAM	00030
44HIB2E,4HCS0,4HCN0,4HCLQ,4HIB2E,4HCN0,4HIB2E,4HCS0,4HBAAN,		CAM	00031
44HXAN,4HXAN,4HIB4E,4HNTN,4HNTN,4HTERM,4HIB4E,4HTERM,4HIB4E,		CAM	00032
44HTERM,4HIB4E,4HRAVU,4HRAVU,4HBPPOP,4HBPPOP,4HBPPOP,4HBPPOP,4HRTOT,		CAM	00033
44HBPAB,4HIB2E,4HCS0,4HCN0,4HCLQ,4HIB2E,4HCN0,4HIB2E,4HCS0,		CAM	00034
44HRAAN,4HXAN,4HXAN,4HIB4E,4HNTN,4HTERM,4HTERM,4HIB4E,4HTERM,		CAM	00035
44HIB4E,4HTERM,4HIB4E,4HRTOT,4HXS,X,4HBA(,4HRTOT,4HXS,X,4HBA(,		CAM	00036
C	DATA FRAGMENT 2	CAM	00037
DATA(L(I),I=	106,210)/ 4HY,MS,4HY,MS,4HS ,4H(TY,4HY,MS,4HY,MS,	CAM	00038
44HS ,4H(TY,4HA,IR,4H,RAT,4H,BIT,4HBA(T,4HRI(K,4HG(TY,4HM,		CAM	00039
44HG(TY,4HA(TY,4HA(TY,4H(TY,4H(TY,4HY,MS,4HY,MS,4H,BAT,4H,RT,		CAM	00040
44HRA(TY,4HRI(K,4HG(TY,4HM ,4HG(TY,4HA(TY,4HA(TY,4H(TY,4H(TY,		CAM	00041
44HY,MS,4HY,MS,4HTY,M,4HTY,M,4HY,MS,4HY,MS,4HTY,M,4HTY,M,4HY,MS,		CAM	00042
44HY,MS,4HL(KR,4HLT,A,4HS(KR,4HNS(K,4HS(KR,4HNS(K,4HS,BT,4HA(TY,		CAM	00043
44HX ,4HCS1,4HCN1,4H0,Q,4HX ,4HCN1,4MX ,4HCS1,4H,BAA,		CAM	00044
44HXNS,4HXNS,4HX ,4H0 ,4HS,TE,4HS,TE,4MX ,4HS,TE,4HX ,		CAM	00045
44HS,TE,4HX ,4HL(KR,4HLT,A,4HS(KR,4HNS(K,4HS(KR,4HNS(K,4HS,RT,		CAM	00046
44HA(TY,4HX ,4HCS1,4HCN1,4H0,Q,4HX ,4HCN1,4MX ,4HCS1,		CAM	00047
44H,R4A,4HXNS,4HXNS,4HX ,4H0 ,4HS,TE,4HS,TE,4HX ,4HS,TE,		CAM	00048
44HX ,4HS,TE,4HX ,4HS,BT,4HNS ,4HBA,4HS,RT,4HNS ,4HBA,		CAM	00049
C	DATA FRAGMENT 3	CAM	00050
DATA(L(I),I=	211,315)/ 4H) ,4H) ,4H) ,4HMS) ,4H) ,4H) ,	CAM	00051
44H) ,4HMS) ,4HAI ,4HS1 ,4HS1 ,4HYI) ,4MAT) ,4H,MS) ,4H ,		CAM	00052
44H) ,4H,MS) ,4H,MS) ,4HMS) ,4H) ,4H) ,4HS1 ,4HS1 ,		CAM	00053
44HYI) ,4HAI) ,4H,MS) ,4H) ,4H) ,4H,MS) ,4H,MS) ,4HMS) ,4HMS) ,		CAM	00054
44H) ,4H) ,4HS) ,4HS) ,4H) ,4H) ,4HS) ,4HS) ,4H) ,		CAM	00055
44H) ,4HA) ,4HBA,4HA) ,4HBA) ,4HA) ,4HBA) ,4H0TNS,4H) ,RA,		CAM	00056
44H) ,4HCS ,4HCN ,4HCS2 ,4H) ,4HCN ,4H) ,4HCS ,4HS,BAA,		CAM	00057
44H,X4S,4H,X4S,4H) ,4H) ,4HRMNS,4HRMNS,4H) ,4HRMNS,4H) ,		CAM	00058
44HRMNS,4H) ,4HAI ,4HRQRA,4HAI ,4HRA) ,4HAI ,4HRA) ,4H0TNS,		CAM	00059
44H) ,BA,4H) ,4HCS ,4HCN ,4HCS2 ,4H) ,4HCN ,4H) ,4HCS ,		CAM	00060
44HS,R4,4H,X4S,4H,X4S,4H) ,4H) ,4HRMNS,4HRMNS,4H) ,4HRMNS,		CAM	00061
44H) ,4HRMNS,4H) ,4H0TNS,4H) ,4HID) ,4H0TNS,4H) ,4HID) ,/		CAM	00062
C	DATA FRAGMENT 4	CAM	00063
DATA(L(I),I=	316,420)/ 44*1H ,4HN,BS,44*1H ,4H,BTO,4HTP ,R*1H ,	CAM	00064
44HNS,B,4HN,X4,4HN,X4,10*1H ,4HN,RS,44*1H ,4H,RTO,4HTP ,8*1H ,		CAM	00065
44HNS,R,4HN,X4,4HN,X4,9*1H ,4H,BTO,4H) ,4HBA=4H,RTO,1H ,4HBA=		CAM	00066
C	DATA FRAGMENT 5	CAM	00067
DATA(L(I),I=	421,525)/ 44*1H ,4HHEL1,44*1H ,4HT ,9*1H ,4HASN ,	CAM	00068

X2*4HS	,10*1H,4MHFL1,4*1H,4HT	,9*1H,4H4SN,2*4HS	,9*1H,	CAM	00069		
X 4HT	,4H	,4H1,4,4HT	,4H	,4H1,4	/	CAM	00070
F14(Q)	= A2-A3*ALOG(A4)*A4**Q-A5*ALOG(A6)*A6**Q					CAM	00071
F24(Q)	= -A3*(ALOG(A4)**2)*A4**Q-A5*(ALOG(A6)**2)*A6**Q					CAM	00072
MOT#6						CAM	00073
12	FORMAT(1H,15,5X,5A4,10X,1X,6F13.5)					CAM	00074
13	FORMAT(1H,15,5X,5A4,10X,1X,2F13.5,13X,2F13.5)					CAM	00075
14	FORMAT(1H,15,5X,5A4,10X,1X,18,5X,5F13.5)					CAM	00076
15	FORMAT(1H,15,5X,5A4,10X,1X,18,5X,18,5X,4F13.5)					CAM	00077
25	FORMAT(1H,15,5X,30HBAKS,RSHELK(ID),RAKNS			,1X,6F13.5)		CAM	00078
26	FORMAT(1H,15,5X,30HBAKS,RSHELK(ID),RAKNS			,1X,6F13.5)		CAM	00079
31	FORMAT(1H,15,5X,30HABQRA,ABQRAS,BSHEL,BSHEL1			,1X,6F13.5)		CAM	00080
32	FORMAT(1H,15,5X,30HVRDAS,VRKBS,VRDANS,VRKBNS			,1X,6F13.5)		CAM	00081
33	FORMAT(1H,15,5X,30HTERMS1,TERMS2,TERMN1,TERMN2			,1X,6F13.5)		CAM	00082
34	FORMAT(1H,15,5X,30HT,TERM1,TERM2,TERMS,TERMS			,1X,6F13.5)		CAM	00083
35	FORMAT(1H,15,5X,30HAIN,A1S,A2N,A2S,A2,A3,A4,A5,A6			,1X,6F13.5/1H,		CAM	00084
1	40X,1X,5F13.5)					CAM	00085
36	FORMAT(1H,15,5X,30HABQRA,ABQRAS,RSHEL,RSHEL1			,1X,6F13.5)		CAM	00086
37	FORMAT(1H,15,5X,30HVRDAS,VRKBS,VRDANS,VRKBNS			,1X,6F13.5)		CAM	00087
	CALL CLRCOM(3,IDL,IDU)					CAM	00088
C						CAM	00089
C	-- DO LOOP ON ID					CAM	00090
C						CAM	00091
	DO 3000 ID=IDL,IDU					CAM	00092
	CALL CAMCLR					CAM	00093
C						CAM	00094
C	-- STARTING DIVISION INVENTORY FOR ID -- B AND R					CAM	00095
C						CAM	00096
	IF(ID=1) 1510,1510,1520					CAM	00097
1510	DO 1512 KBD=1,NKBD					CAM	00098
1512	BDI(KBD,ID) = BDA(KBD,ID)					CAM	00099
	DO 1514 KRD=1,NKRD					CAM	00100
1514	RDI(KRD,ID) = RDA(KRD,ID)					CAM	00101
	GO TO 1600					CAM	00102
1520	IDM1 = ID-1					CAM	00103
	DO 1522 KBD=1,NKBD					CAM	00104
1522	BDI(KBD,ID) = BDI(KBD,IDM1) - BDD(KBD,IDM1) + BDA(KBD,ID)					CAM	00105
	DO 1524 KRD=1,NKRD					CAM	00106
	RDI(KRD,ID) = RDI(KRD,IDM1) - RDD(KRD,IDM1) + RDA(KRD,ID)					CAM	00107
1524	CONTINUE					CAM	00108
C						CAM	00109
C	-- GROUND FIREPOWER FOR ID -- B AND R					CAM	00110
C						CAM	00111
1600	BGF(ID) = 0.					CAM	00112
	DO 1610 KBD=1,NKBD					CAM	00113
1610	BGF(ID) = BDI(KBD,ID) * FRD(KBD)					CAM	00114
	RGF(ID) = 0.					CAM	00115
	DO 1620 KRD=1,NKRD					CAM	00116
	RGF(ID) = RDI(KRD,ID) * FRD(KRD)					CAM	00117
1620	CONTINUE					CAM	00118
C						CAM	00119
C	SHELTER INVENTORY FOR ID--B AND R					CAM	00120
C						CAM	00121
	IF(ID=1) 1621,1621,1622					CAM	00122
1622	CONTINUE					CAM	00123
	SHELB(ID) = SHELB(IDM1) - BSHELK(IDM1)					CAM	00124
	SHELR(ID) = SHELR(IDM1) - RSHELK(IDM1)					CAM	00125
	GO TO 1623					CAM	00126

1621	CONTINUE	CAM	00127
	SHELH(1) = PRSHEL	CAM	00128
	SHELH(1) = PRSHEL	CAM	00129
1623	CONTINUE	CAM	00130
C		CAM	00131
C	STARTING AIRCRAFT INVENTORY FOR ID-- B AND R	CAM	00132
C		CAM	00133
	IF(ID=1)2010,2010,2020	CAM	00134
2010	DO 2012 KBA=1,NKBA	CAM	00135
2012	HAI(KBA,ID)=RAA(KBA,ID)	CAM	00136
	DO 2014 KRA=1,NKRA	CAM	00137
2014	RAI(KRA,ID)=RAA(KRA,ID)	CAM	00138
	GO TO 2050	CAM	00139
2020	IDM1=ID-1	CAM	00140
	DO 2022 KBA=1,NKBA	CAM	00141
2022	HAI(KBA,ID)=RAI(KBA,IDM1)-BAD(KBA,IDM1)+BAA(KBA,ID)	CAM	00142
	DO 2024 KRA=1,NKRA	CAM	00143
	RAI(KRA,ID)=RAI(KRA,IDM1)-RAD(KRA,IDM1)+RAA(KRA,ID)	CAM	00144
2024	CONTINUE	CAM	00145
C		CAM	00146
C	DETERMINATION OF GRA AND	CAM	00147
C	AIRCRAFT ASSIGNMENTS--BLUE AND RED	CAM	00148
C		CAM	00149
2050	CONTINUE	CAM	00150
	IF(HAI(1,ID)-DBGRA) 2051,2052,2052	CAM	00151
2051	ABGRA=HAI(1,ID)	CAM	00152
	BAAS=0.0	CAM	00153
	GO TO 2053	CAM	00154
2052	ABGRA=DBGRA	CAM	00155
	BAAS= HAI(1,ID)-DBGRA	CAM	00156
2053	IF(RAI(1,ID)-DRGRA) 2054,2055,2055	CAM	00157
2054	ARGRA=RAI(1,ID)	CAM	00158
	RAAS=0.0	CAM	00159
	GO TO 2056	CAM	00160
2055	ARGRA=DRGRA	CAM	00161
	RAAS= RAI(1,ID)-DRGRA	CAM	00162
2056	CONTINUE	CAM	00163
2060	CONTINUE	CAM	00164
	IPD=1	CAM	00165
	IF(ID .GE. IDL2) IPD=2	CAM	00166
	IF(ID .GE. IDL3) IPD=3	CAM	00167
	SUMB=SUMR =0.0	CAM	00168
	DO 2061 MS= 1,3	CAM	00169
	BA(1,MS)=PROPB(MS,IPD)*BAAS	CAM	00170
	RA(1,MS)=PROPR(MS,IPD)*RAAS	CAM	00171
	BA(2,MS) = RAI(MS+1,ID)	CAM	00172
	RA(2,MS) = RAI(MS+1,ID)	CAM	00173
	SUMB=SUMB+ BA(1,MS)	CAM	00174
	SUMR=SUMR+ RA(1,MS)	CAM	00175
2061	CONTINUE	CAM	00176
	BANAS= BAAS-SUMB	CAM	00177
	RANAS= RAAS-SUMR	CAM	00178
C		CAM	00179
C	SORTIE RATES FOR BLUE AND RED	CAM	00180
C		CAM	00181
	IF(ID=IDB5RC) 2080,2085,2085	CAM	00182
2080	CONTINUE	CAM	00183
	DO 2081 TY=1,2	CAM	00184

DO 2081 MS=1,3	CAM	00185
SORRB(TY,MS) = SORRR1(TY,MS)	CAM	00186
2081 CONTINUE	CAM	00187
BFRAC=BFRAC1	CAM	00188
GO TO 2089	CAM	00189
2085 CONTINUE	CAM	00190
DO 2086 TY=1,2	CAM	00191
DO 2086 MS=1,3	CAM	00192
SORRB(TY,MS) = SORRR2(TY,MS)	CAM	00193
2086 CONTINUE	CAM	00194
BFRAC=BFRAC2	CAM	00195
2089 CONTINUE	CAM	00196
IF(ID-IDSRC) 2090,2095,2095	CAM	00197
2090 CONTINUE	CAM	00198
DO 2091 TY=1,2	CAM	00199
DO 2091 MS=1,3	CAM	00200
SORRR(TY,MS) = SORRR1(TY,MS)	CAM	00201
2091 CONTINUE	CAM	00202
RFRAC=RFRAC1	CAM	00203
GO TO 2100	CAM	00204
2095 CONTINUE	CAM	00205
DO 2096 TY=1,2	CAM	00206
DO 2096 MS=1,3	CAM	00207
SORRR(TY,MS) = SORRR2(TY,MS)	CAM	00208
2096 CONTINUE	CAM	00209
RFRAC=RFRAC2	CAM	00210
C	CAM	00211
C	CAM	00212
C AIRCRAFT DESTRUCTION -- AIR TO AIR INTERACTION	CAM	00213
C	CAM	00214
C	CAM	00215
2100 CONTINUE	CAM	00216
C	CAM	00217
C SORTIES FOR BLUE AND RED	CAM	00218
C	CAM	00219
DO 2101 TY=1,2	CAM	00220
DO 2101 MS=1,3	CAM	00221
BS(TY,MS) = BA(TY,MS)*SORRB(TY,MS)	CAM	00222
RS(TY,MS) = RA(TY,MS)*SORRR(TY,MS)	CAM	00223
BANF(TY,MS)=BANF(TY,MS)+ 0.0	CAM	00224
IF(SORRB(TY,MS) .LT. 1.0) BANF(TY,MS)=BA(TY,MS)*(1.-SORRB(TY,MS))	CAM	00225
IF(SORRR(TY,MS) .LT. 1.0) RANF(TY,MS)=RA(TY,MS)*(1.-SORRR(TY,MS))	CAM	00226
2101 CONTINUE	CAM	00227
BITS= BS(1,3) + BS(2,3)	CAM	00228
BATS= BS(1,1) + BS(1,2) +BS(2,1) + BS(2,2)	CAM	00229
RITS=RS(1,3) + RS(2,3)	CAM	00230
RATS= RS(1,1)+RS(1,2)+RS(2,1)+RS(2,2)	CAM	00231
C	CAM	00232
C CHECKS	CAM	00233
C	CAM	00234
IBIRA=IBARI=0	CAM	00235
IF(RATS .LT. 1. .OR. BITS .LT. 1.) IBIRA=1	CAM	00236
IF(RITS .LT. 1. .OR. BATS .LT. 1.) IBARI=1	CAM	00237
C	CAM	00238
C COMPUTING AVERAGE DETECTION PARAMETERS	CAM	00239
C	CAM	00240
2100 CONTINUE	CAM	00241
IF(IBIRA .EQ. 1) GO TO 2185	CAM	00242

DO	2181	TYB	=1,2	CAM	00243
SUM=	0.0			CAM	00244
DO	2182	TYR	=1,2	CAM	00245
DO	2182	MSR	=1,2	CAM	00246
INDR=	MSR+ 2*(TYR-1)			CAM	00247
SUM=	SUM+ MIDRA(TYB,INDR)*RS(TYR,MSR)			CAM	00248
2182	CONTINUE			CAM	00249
	VRIDRA(TYB)= SUM/RATS			CAM	00250
2181	CONTINUE			CAM	00251
	IF(IAA .EQ. 1) GO TO 2185			CAM	00252
	DO 2183 TYR=1,2			CAM	00253
	DO 2183 MSR=1,2			CAM	00254
	INDR= MSR+ 2*(TYR-1)			CAM	00255
	SUM= 0.0			CAM	00256
	DO 2184 TYB=1,2			CAM	00257
	SUM= SUM+ MADBI(INDR,TYB)*BS(TYB,3)			CAM	00258
2184	CONTINUE			CAM	00259
	VRADBI(INDR)= SUM/RITS			CAM	00260
2183	CONTINUE			CAM	00261
2185	CONTINUE			CAM	00262
	IF(IAA .EQ. 1) GO TO 2200			CAM	00263
	DO 2186 TYR	=1,2		CAM	00264
	SUM= 0.0			CAM	00265
	DO 2187 TYB	=1,2		CAM	00266
	DO 2187 MSB	=1,2		CAM	00267
	INDB= MSB+ 2*(TYB-1)			CAM	00268
	SUM= SUM+ RIDBA(TYR,INDB)*BS(TYB,MSB)			CAM	00269
2187	CONTINUE			CAM	00270
	VRIDBA(TYR)=SUM/BATS			CAM	00271
2186	CONTINUE			CAM	00272
	IF(IAA .EQ. 1) GO TO 2200			CAM	00273
	DO 2188 TYR=1,2			CAM	00274
	DO 2188 MSR=1,2			CAM	00275
	INDB= MSB+ 2*(TYB-1)			CAM	00276
	SUM= 0.0			CAM	00277
	DO 2189 TYR=1,2			CAM	00278
	SUM= SUM+ BADRI(INDB,TYR)*RS(TYR,3)			CAM	00279
2189	CONTINUE			CAM	00280
	VBADRI(INDB)=SUM/RITS			CAM	00281
2188	CONTINUE			CAM	00282
2200	CONTINUE			CAM	00283
	WRITE(MOT,61) ID			CAM	00284
61	FORMAT(/////1H ,45HBLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY			CAM	00285
	1, I4)			CAM	00286
	WRITE(MOT,12) ID, (L(1,I),I=1,5),((BS(TY,MS),MS=1,3),TY=1,2)			CAM	00287
	WRITE(MOT,12) ID, (L(2,I),I=1,5),((BA(TY,MS),MS=1,3),TY=1,2)			CAM	00288
	WRITE(MOT,12) ID, (L(3,I),I=1,5),RANAS			CAM	00289
	WRITE(MOT,12) ID, (L(4,I),I=1,5),((BANF(TY,MS),MS=1,3),TY=1,2)			CAM	00290
	WRITE(MOT,71) ID			CAM	00291
71	FORMAT(1H ,44HRED SORTIES AND AIRCRAFT AT BEGINNING OF DAY ,I4)			CAM	00292
	WRITE(MOT,12) ID, (L(5,I),I=1,5),((RS(TY,MS),MS=1,3),TY=1,2)			CAM	00293
	WRITE(MOT,12) ID, (L(6,I),I=1,5),((RA(TY,MS),MS=1,3),TY=1,2)			CAM	00294
	WRITE(MOT,12) ID, (L(7,I),I=1,5),RANAS			CAM	00295
	WRITE(MOT,12) ID, (L(8,I),I=1,5),((RANF(TY,MS),MS=1,3),TY=1,2)			CAM	00296
C				CAM	00297
C	CHOOSE DESIRED METHOD OF ATTRITION			CAM	00298
C	STATEMENT NUMBERS IN 22005 FOR FIRST METHOD			CAM	00299
C	STATEMENT NUMBERS IN 23005 FOR SECOND METHOD			CAM	00300

C	IF(IAA .EQ. 1) GO TO 2300	CAM	00301
C	BLUE INTERCEPTORS, RED ATTACKERS	CAM	00302
C	IF(IBIRA .EQ. 1) GO TO 2249	CAM	00303
C	BLUE INTERCEPTORS KILL RED ATTACKERS	CAM	00304
C	RATS1=RATS/XNBAA	CAM	00305
	DO 2210 TYR =1,2	CAM	00306
	DO 2210 MSR =1,2	CAM	00307
	INDR= MSR* 2*(TYR-1)	CAM	00308
	PROD=1.0	CAM	00309
	DO 2220 TYB =1,2	CAM	00310
	X1= (1.-(1.-VBIORA(TYB))*RATS1)/RATS1	CAM	00311
	X15=AMAX1(0.0, 1.-BIKRA(TYB,INDR)*X1)	CAM	00312
	PROD= PROD* X15*(RS(TYB,3)/XNBAA)	CAM	00313
2220	CONTINUE	CAM	00314
	RSKAA(TYR,MSR)=RS(TYR,MSR)*(1.-PROD)	CAM	00315
2210	CONTINUE	CAM	00316
C	RED ATTACKERS KILL BLUE INTERCEPTORS	CAM	00317
C	BITS1=BITS/XNBAA	CAM	00318
	DO 2230 TYB =1,2	CAM	00319
	PROD=1.0	CAM	00320
	DO 2240 TYR =1,2	CAM	00321
	DO 2240 MSR =1,2	CAM	00322
	INDR= MSR* 2*(TYR-1)	CAM	00323
	X1=(1.-(1.-VRADBI(INDR))*BITS1)/BITS1	CAM	00324
	X15=AMAX1(0.0, 1.-RAKBI(INDR,TYB)*X1)	CAM	00325
	PROD=PROD* X15*(RS(TYR,MSR)/XNBAA)	CAM	00326
2240	CONTINUE	CAM	00327
	BSKAA(TYB,3)= BS(TYB,3)*(1.-PROD)	CAM	00328
2230	CONTINUE	CAM	00329
	GO TO 2250	CAM	00330
2249	RAKAA(1,1)=RAKAA(1,2)=RAKAA(2,1)=RAKAA(2,2)=0.0	CAM	00331
	RSKAA(1,1)=RSKAA(1,2)=RSKAA(2,1)=RSKAA(2,2)=0.0	CAM	00332
	BSKAA(1,3)=BSKAA(2,3)=0.0	CAM	00333
	BAKAA(1,3)=BAKAA(2,3)=0.0	CAM	00334
2250	CONTINUE	CAM	00335
C	RED INTERCEPTORS, BLUE ATTACKERS	CAM	00336
C	IF(IBARI .EQ. 1) GO TO 2299	CAM	00337
C	RED INTERCEPTORS KILL BLUE ATTACKERS	CAM	00338
C	BATS1=BATS/XNBAA	CAM	00339
	DO 2260 TYB =1,2	CAM	00340
	DO 2260 MSB =1,2	CAM	00341
	INDB= MSB* 2*(TYB-1)	CAM	00342
	PROD=1.0	CAM	00343
	DO 2270 TYR =1,2	CAM	00344
	X1= (1.-(1.-VBIORA(TYR))*BATS1)/BATS1	CAM	00345
	X15=AMAX1(0.0, 1.-RIKBA(TYR,INDB)*X1)	CAM	00346
	PROD=PROD* X15*(RS(TYR,3)/XNBAA)	CAM	00347
		CAM	00348
		CAM	00349
		CAM	00350
		CAM	00351
		CAM	00352
		CAM	00353
		CAM	00354
		CAM	00355
		CAM	00356
		CAM	00357
		CAM	00358

2270	CONTINUE	CAM	00359
	BSKAA(TYB,MSB)=BS(TYB,MSB)*(1.-PROD)	CAM	00360
2280	CONTINUE	CAM	00361
C		CAM	00362
C	BLUE ATTACKERS KILL RED INTERCEPTORS	CAM	00363
C		CAM	00364
	RITS1=RITS/XNRAA	CAM	00365
	DO 2280 TYR =1,2	CAM	00366
	PROD=1.0	CAM	00367
	DO 2290 TYB=1,2	CAM	00368
	DO 2290 MSB=1,2	CAM	00369
	INDH= MSB* 2*(TYB-1)	CAM	00370
	X1=(1.-(1.-VBADRI(INDH))*RITS1)/RITS1	CAM	00371
	X15=AMAX1(0.0, 1.-BAKRI(INDH,TYR)*X1)	CAM	00372
	PROD=PROD* X15*(BS(TYB,MSB)/XNRAA)	CAM	00373
2290	CONTINUE	CAM	00374
	RSKAA(TYR,3)=RS(TYR,3)*(1.-PROD)	CAM	00375
2290	CONTINUE	CAM	00376
	GO TO 2400	CAM	00377
2299	BSKAA(1,1) =BSKAA(1,2) = BSKAA(2,1) = BSKAA(2,2) = 0.0	CAM	00378
	BAKAA(1,1) =BAKAA(1,2) = BAKAA(2,1) = BAKAA(2,2) = 0.0	CAM	00379
	RSKAA(1,3) = RSKAA(2,3) = 0.0	CAM	00380
	RAKAA(1,3) = RAKAA(2,3) = 0.0	CAM	00381
	GO TO 2400	CAM	00382
2300	CONTINUE	CAM	00383
C		CAM	00384
C	ALTERNATE ATTRITION SCHEME	CAM	00385
C	IN THIS ATTRITION METHOD ATTACKERS SHOOT AT INTERCEPTORS ONLY IF	CAM	00386
C	ENGAGED BY THEM AND THEN ONLY (1.-ALPHA) OF THE TIME	CAM	00387
C		CAM	00388
C	BLUE INTERCEPTORS, RED ATTACKERS	CAM	00389
C		CAM	00390
	IF (IBIRA .EQ. 1) GO TO 2349	CAM	00391
C		CAM	00392
C	RED ATTACKERS KILLED	CAM	00393
C		CAM	00394
	RATS1=RATS/XNBAA	CAM	00395
	DO 2310 TYR =1,2	CAM	00396
	DO 2310 MSB =1,2	CAM	00397
	INDR= MSB* 2*(TYR-1)	CAM	00398
	PROD1=PROD2=1.0	CAM	00399
	DO 2311 TYB =1,2	CAM	00400
	X1= (1.-(1.-VBIDRA(TYB))*RATS1)/RATS1	CAM	00401
	X15=AMAX1(0.0, 1.-RIKRA(TYB,INDR)*X1)	CAM	00402
	X2 =AMAX1(0.0, 1.-X1)	CAM	00403
	PROD1=PROD1*X15*(RS(TYB,3)/XNBAA)	CAM	00404
	PROD2=PROD2*X2 *(RS(TYB,3)/XNBAA)	CAM	00405
2311	CONTINUE	CAM	00406
	RSKAA(TYR,MSB)=RS(TYR,MSB)*(1.-PROD1)	CAM	00407
	RSENG(TYR,MSB)=RS(TYR,MSB)*(1.-PROD2)	CAM	00408
2310	CONTINUE	CAM	00409
C		CAM	00410
C	BLUE INTERCEPTORS KILLED	CAM	00411
C		CAM	00412
	DENOM= BS(1,3)*VBIDRA(1) + BS(2,3)*VBIDRA(2)	CAM	00413
	BPENG(1)=(BS(1,3)*VBIDRA(1))/DENOM	CAM	00414
	BPENG(2)=(BS(2,3)*VBIDRA(2))/DENOM	CAM	00415
	DO 2320 TYB =1,2	CAM	00416

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SUM= 0.0
DO 2321 TYR =1,2
DO 2321 MSR =1,2
INDB= MSR* 2*(TYR-1)
SUM=SUM+ RSENG(TYR,MSR)*RAKBI(INDB,TYR)*BPENG(TYB)*
1 (1.-RALPHA(TYB,MSR))
2321 CONTINUE
BSKAA(TYB,3)=SUM
2320 CONTINUE
GO TO 2350
2349 RAKAA(1,1)=RAKAA(1,2)=RAKAA(2,1)=RAKAA(2,2)=0.0
RSKAA(1,1)=RSKAA(1,2)=RSKAA(2,1)=RSKAA(2,2)=0.0
BSKAA(1,3)=BSKAA(2,3)=0.0
BAKAA(1,3)=BAKAA(2,3)=0.0
2350 CONTINUE
C
C RED INTERCEPTORS, BLUE ATTACKERS
C
IF(IBARI.EQ.1) GO TO 2399
C
C BLUE ATTACKERS KILLED
C
BATS1=BATS/XNRAA
DO 2360 TYB =1,2
DO 2360 MSB =1,2
INDB= MSB* 2*(TYB-1)
PROD1=PROD2=1.0
DO 2361 TYR =1,2
X1= (1.-(1.-VRIDBA(TYR))*BATS1)/BATS1
X15=AMAX1(0.0, 1.-RIKBA(TYR,INDB)*X1)
X2=AMAX1(0.0, 1.-X1)
PROD1=PROD1*X15*(RS(TYB,3)/XNRAA)
PROD2=PROD2*X2*(RS(TYR,3)/XNRAA)
2361 CONTINUE
BSKAA(TYB,MSB)=BS(TYB,MSB)*(1.-PROD1)
BSENG(TYB,MSB)=BS(TYB,MSB)*(1.-PROD2)
2360 CONTINUE
C
C RED INTERCEPTORS KILLED
C
DENOM= RS(1,3)*VRIDBA(1)+RS(2,3)*VRIDBA(2)
RPENG(1)=(RS(1,3)*VRIDBA(1))/DENOM
RPENG(2)=(RS(2,3)*VRIDBA(2))/DENOM
DO 2370 TYR =1,2
SUM= 0.0
DO 2371 TYB =1,2
DO 2371 MSB =1,2
INDB= MSB* 2*(TYB-1)
SUM=SUM+ BSENG(TYB,MSB)*BAKRI(INDB,TYR)*RPENG(TYR)*
1 (1.-RALPHA(TYB,MSB))
2371 CONTINUE
RSKAA(TYR,3)= SUM
2370 CONTINUE
GO TO 2400
2399 BSKAA(1,1)=BSKAA(1,2)=BSKAA(2,1)=BSKAA(2,2)=0.0
BAKAA(1,1)=BAKAA(1,2)=BAKAA(2,1)=BAKAA(2,2)=0.0
RSKAA(1,3)=RSKAA(2,3)=0.0
RAKAA(1,3)=RAKAA(2,3)=0.0

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24n0	CONTINUE	CAM	00475
C		CAM	00476
C	FIRST REVISED ATTACK-- SUBTRACT OUT AIRCRAFT LOSSES	CAM	00477
C	IN AIR TO AIR INTERACTION	CAM	00478
C		CAM	00479
C	COMPUTE AND SUBTRACT OUT SORTIES LOST	CAM	00480
C		CAM	00481
	IF(IAA) 2401,2401,2403	CAM	00482
24n1	DO 2402 TY=1,2	CAM	00483
	DO 2402 MS=1,3	CAM	00484
	BS(TY,MS)= RS(TY,MS)-BSKAA(TY,MS)	CAM	00485
	RS(TY,MS)= RS(TY,MS)-BSKAA(TY,MS)	CAM	00486
24n2	CONTINUE	CAM	00487
	GO TO 2407	CAM	00488
24n3	CONTINUE	CAM	00489
	DO 2405 TY=1,2	CAM	00490
	HS(TY,3)=BS(TY,3)-RSKAA(TY,3)	CAM	00491
	RS(TY,3)=HS(TY,3)-RSKAA(TY,3)	CAM	00492
	BSFB(TY,3)=RSFB(TY,3)=0.0	CAM	00493
	DO 2405 MS=1,2	CAM	00494
	BSFB(TY,MS)=(1.-BAPHA(TY,MS))*(BSENG(TY,MS)-BSKAA(TY,MS))	CAM	00495
	RSFB(TY,MS)=(1.-BAPHA(TY,MS))*(RSENG(TY,MS)-RSKAA(TY,MS))	CAM	00496
	BS(TY,MS)=BS(TY,MS)-BSKAA(TY,MS)-BSFB(TY,MS)	CAM	00497
	RS(TY,MS)=RS(TY,MS)-RSKAA(TY,MS)-RSFB(TY,MS)	CAM	00498
24n5	CONTINUE	CAM	00499
24n7	CONTINUE	CAM	00500
C		CAM	00501
C	CONVERT SORTIES LOST TO AIRCRAFT LOST	CAM	00502
C	FIND REMAINING NUMBER OF AIRCRAFT	CAM	00503
C		CAM	00504
	DO 2410 TY=1,2	CAM	00505
	DO 2410 MS=1,3	CAM	00506
	SRB=AMAX1(1.0,SORRR(TY,MS))	CAM	00507
	SRR= AMAX1(1.0,SURRR(TY,MS))	CAM	00508
	BAFB(TY,MS)=BSFB(TY,MS)/SRB	CAM	00509
	RAFB(TY,MS)=RSFB(TY,MS)/SRR	CAM	00510
	BAKAA(TY,MS)=BSKAA(TY,MS)/SRB	CAM	00511
	RAKAA(TY,MS)=RSKAA(TY,MS)/SRR	CAM	00512
	BA(TY,MS)=BA(TY,MS)-BANF(TY,MS)-BAFB(TY,MS)-BAKAA(TY,MS)	CAM	00513
	RA(TY,MS)=RA(TY,MS)-RANF(TY,MS)-RAFB(TY,MS)-RAKAA(TY,MS)	CAM	00514
24j0	CONTINUE	CAM	00515
	WRITE(MOT,62)	CAM	00516
A2	FORMAT(1H,43HATTITION TO BLUE IN AIR-TO-AIR INTERACTION)	CAM	00517
	WRITE(MOT,15) 10, (L(9,I),I=1,5),IIRA,IBARI	CAM	00518
	WRITE(MOT,12) 10, (L(10,I),I=1,5),RATS,RATS1	CAM	00519
	WRITE(MOT,12) 10, (L(11,I),I=1,5),RITS,RITS1	CAM	00520
	WRITE(MOT,12) 10, (L(12,I),I=1,5),VRIDBA	CAM	00521
	WRITE(MOT,12) 10, (L(13,I),I=1,5),VRADBI	CAM	00522
	WRITE(MOT,13) 10, (L(14,I),I=1,5),((BSENG(TY,MS),MS=1,2),TY=1,2)	CAM	00523
	WRITE(MOT,12) 10, (L(15,I),I=1,5),DENOM	CAM	00524
	WRITE(MOT,12) 10, (L(16,I),I=1,5),RPENG	CAM	00525
	WRITE(MOT,12) 10, (L(17,I),I=1,5),((BSKAA(TY,MS),MS=1,3),TY=1,2)	CAM	00526
	WRITE(MOT,12) 10, (L(18,I),I=1,5),((BAKAA(TY,MS),MS=1,3),TY=1,2)	CAM	00527
	WRITE(MOT,12) 10, (L(19,I),I=1,5),((BSFB(TY,MS),MS=1,3),TY=1,2)	CAM	00528
	WRITE(MOT,12) 10, (L(20,I),I=1,5),((BAFB(TY,MS),MS=1,3),TY=1,2)	CAM	00529
	WRITE(MOT,12) 10, (L(21,I),I=1,5),((BS(TY,MS),MS=1,3),TY=1,2)	CAM	00530
	WRITE(MOT,12) 10, (L(22,I),I=1,5),((BA(TY,MS),MS=1,3),TY=1,2)	CAM	00531
	WRITE(MOT, 72)	CAM	00532

72	FORMAT(1H,43HATTITION TO RED IN AIR-TO-AIR INTERACTION)	CAM	00533
	WRITE(MOT,12) ID, (L(23,I),I=1,5),BATS,BATS;	CAM	00534
	WRITE(MOT,12) ID, (L(24,I),I=1,5),RITS,RITS;	CAM	00535
	WRITE(MOT,12) ID, (L(25,I),I=1,5),VRINH	CAM	00536
	WRITE(MOT,12) ID, (L(26,I),I=1,5),VRADRI	CAM	00537
	WRITE(MOT,13) ID, (L(27,I),I=1,5),((RSENG(TY,MS),MS=1,2),TY=1,2)	CAM	00538
	WRITE(MOT,12) ID, (L(28,I),I=1,5),DENOM	CAM	00539
	WRITE(MOT,12) ID, (L(29,I),I=1,5),RPENG	CAM	00540
	WRITE(MOT,12) ID, (L(30,I),I=1,5),((RSKAA(TY,MS),MS=1,3),TY=1,2)	CAM	00541
	WRITE(MOT,12) ID, (L(31,I),I=1,5),((RAKAA(TY,MS),MS=1,3),TY=1,2)	CAM	00542
	WRITE(MOT,12) ID, (L(32,I),I=1,5),((RSFR(TY,MS),MS=1,3),TY=1,2)	CAM	00543
	WRITE(MOT,12) ID, (L(33,I),I=1,5),((RAFR(TY,MS),MS=1,3),TY=1,2)	CAM	00544
	WRITE(MOT,12) ID, (L(34,I),I=1,5),((RS(TY,MS),MS=1,3),TY=1,2)	CAM	00545
	WRITE(MOT,12) ID, (L(35,I),I=1,5),((RA(TY,MS),MS=1,3),TY=1,2)	CAM	00546
C		CAM	00547
C	BLUE AND RED SAMs AND SECOND REVISED ATTACK	CAM	00548
C	FIND AND SUBTRACT OUT SORTIES AND AIRCRAFT KILLED BY SAMs	CAM	00549
C		CAM	00550
	DO 2415 TY=1,2	CAM	00551
	BSL(TY,3)=RSL(TY,3)= 0.0	CAM	00552
	DO 2416 MS=1,2	CAM	00553
	BSL(TY,MS)= BSAMZB(TY,MS)*BS(TY,MS)	CAM	00554
	RSL(TY,MS)= BSAMZR(TY,MS)*RS(TY,MS)	CAM	00555
2416	CONTINUE	CAM	00556
2415	CONTINUE	CAM	00557
	DO 2420 TY=1,2	CAM	00558
	DO 2420 MS=1,3	CAM	00559
	SRB=AMAX1(1.0,SORRR(TY,MS))	CAM	00560
	SRR=AMAX1(1.0,SORRR(TY,MS))	CAM	00561
	BAL(TY,MS)= HSL(TY,MS)/SRB	CAM	00562
	RAL(TY,MS)= RSL(TY,MS)/SRR	CAM	00563
	BS(TY,MS)=BS(TY,MS)-BSL(TY,MS)	CAM	00564
	BA(TY,MS)=BA(TY,MS)-BAL(TY,MS)	CAM	00565
	RS(TY,MS)=RS(TY,MS)-RSL(TY,MS)	CAM	00566
	RA(TY,MS)=RA(TY,MS)-RAL(TY,MS)	CAM	00567
2420	CONTINUE	CAM	00568
	WRITE(MOT, 63)	CAM	00569
63	FORMAT(1H,25HBLUE LOSSES TO ENEMY SAMs)	CAM	00570
	WRITE(MOT,12) ID, (L(36,I),I=1,5),((BSL(TY,MS),MS=1,3),TY=1,2)	CAM	00571
	WRITE(MOT,12) ID, (L(37,I),I=1,5),((BAL(TY,MS),MS=1,3),TY=1,2)	CAM	00572
	WRITE(MOT,12) ID, (L(38,I),I=1,5),((BS(TY,MS),MS=1,3),TY=1,2)	CAM	00573
	WRITE(MOT,12) ID, (L(39,I),I=1,5),((BA(TY,MS),MS=1,3),TY=1,2)	CAM	00574
	WRITE(MOT, 73)	CAM	00575
73	FORMAT(1H,25HRED LOSSES TO ENEMY SAMs)	CAM	00576
	WRITE(MOT,12) ID, (L(40,I),I=1,5),((RSL(TY,MS),MS=1,3),TY=1,2)	CAM	00577
	WRITE(MOT,12) ID, (L(41,I),I=1,5),((RAL(TY,MS),MS=1,3),TY=1,2)	CAM	00578
	WRITE(MOT,12) ID, (L(42,I),I=1,5),((RS(TY,MS),MS=1,3),TY=1,2)	CAM	00579
	WRITE(MOT,12) ID, (L(43,I),I=1,5),((RA(TY,MS),MS=1,3),TY=1,2)	CAM	00580
C		CAM	00581
C		CAM	00582
C	AIRCRAFT DESTRUCTION--AIRBASE ATTACK	CAM	00583
C		CAM	00584
C	BLUE AIRBASES	CAM	00585
C		CAM	00586
C		CAM	00587
C		CAM	00588
C	COMPUTE NUMBER OF BLUE AIRCRAFT VULNERABLE TO ABA BY RED	CAM	00589
C		CAM	00590

BSHEL=SHSLH(10)	CAM	00591
IF(SHSLH(10).LT.1.) BSHEL=0.	CAM	00592
BAVUL(1)=BANAS	CAM	00593
DO 2501 MS=1,3	CAM	00594
BAVUL(1)=BAVUL(1)+RA(1,MS)+BANF(1,MS)+BAFB(1,MS)	CAM	00595
2501 CONTINUE	CAM	00596
DO 2502 KBA=2,4	CAM	00597
MS=KBA-1	CAM	00598
BAVUL(KBA)=RA(2,MS)+BAFB(2,MS)+BANF(2,MS)	CAM	00599
2502 CONTINUE	CAM	00600
WRITE(MOT,131) IRABA	CAM	00601
131 FORMAT(1H0,51HBLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE	CAM	00602
1,I5)	CAM	00603
WRITE(MOT,12) IU, (L(44,I),I=1,5),BAVUL	CAM	00604
ABGRAS=AMIN1(ABGRA,BSHEL)	CAM	00605
HSHEL1=BSHEL-ABGRAS	CAM	00606
WRITE(MOT,31) IU, ABGRA,ABGRAS,HSHEL,BSHEL1	CAM	00607
ABQRAN=ABGRA-ABGRAS	CAM	00608
BAVULT=BAVUL(1)+BAVUL(2)+BAVUL(3)+BAVUL(4)	CAM	00609
BSHEL1=AMIN1(BSHEL1,BAVULT)	CAM	00610
WRITE(MOT,12) IU, (L(45,I),I=1,5),BAVULT,ABQRAN,BSHEL1	CAM	00611
IF(BAVULT.EQ.0.0) GO TO 2505	CAM	00612
DO 2504 KBA=1,NKBA	CAM	00613
BPOPS(KBA)=HSHEL1*(BAVUL(KBA)/BAVULT)	CAM	00614
2504 CONTINUE	CAM	00615
2505 CONTINUE	CAM	00616
DO 2506 KBA=1,NKBA	CAM	00617
BPOPNS(KBA)=BFHAC*(BAVUL(KBA)-BPOPS(KBA))	CAM	00618
BPOPS(KBA)=BFHAC*BPOPNS(KBA)	CAM	00619
2506 CONTINUE	CAM	00620
WRITE(MOT,12) IU, (L(46,I),I=1,5),BPOPS	CAM	00621
WRITE(MOT,12) IU, (L(47,I),I=1,5),BPOPNS	CAM	00622
BPOPS(I)=BPOPS(I)+ABGRAS	CAM	00623
BPOPNS(I)=BPOPNS(I)+ABQRAN	CAM	00624
WRITE(MOT,12) IU, (L(48,I),I=1,5),BPOPS	CAM	00625
WRITE(MOT,12) IU, (L(49,I),I=1,5),BPOPNS	CAM	00626
BTOTS=BTOTNS+0.0	CAM	00627
DO 2507 KBA=1,4	CAM	00628
BTOTS=BTOTS+BPOPS(KBA)	CAM	00629
BTOTNS=BTOTNS+BPOPNS(KBA)	CAM	00630
2507 CONTINUE	CAM	00631
BTOT=BTOTS+BTOTNS	CAM	00632
WRITE(MOT,12) IU, (L(50,I),I=1,5),BTOTS,BTOTNS,BTOT	CAM	00633
RED ATTACKERS--COMPUTE NUMBER OF RED ATTACK PASSES	CAM	00634
DO 2509 TYR=1,2	CAM	00635
PRABA(TYR)=HS(TYR,2)*HPASS(TYR)	CAM	00636
2509 CONTINUE	CAM	00637
RATP=PRABA(1)+PRABA(2)	CAM	00638
WRITE(MOT,12) IU, (L(51,I),I=1,5),PRABA,RATP	CAM	00639
CHECKS	CAM	00640
IF(RATP.LT.1.0.OR.BTOT.LT.1.0) GO TO 2598	CAM	00641
AVERAGE RED EFFECTIVENESS PARAMETERS	CAM	00642
	CAM	00643
	CAM	00644
	CAM	00645
	CAM	00646
	CAM	00647
	CAM	00648

VRDBS = (RDBS(1)*PRABA(1)+ RDBS(2)*PRABA(2))/RATP	CAM	00649
VRKBS = (RKBS(1)*PRABA(1)+ RKBS(2)*PRABA(2))/RATP	CAM	00650
VRDBNS = (RDBNS(1)*PRABA(1)+RDBNS(2)*PRABA(2))/RATP	CAM	00651
VRKBNS = (RKBN(1)*PRABA(1)+RKBN(2)*PRABA(2))/RATP	CAM	00652
WRITE(MOT,32) ID, VRDBS,VRKBS,VRDBNS,VRKBNS	CAM	00653
C	CAM	00654
C USING APPROPRIATE RED ATTACK MODE, COMPUTE NUMBER OF BLUE AIRCRAFT	CAM	00655
C KILLED	CAM	00656
C	CAM	00657
GO TO (2510,2520,2530,2540), IRABA	CAM	00658
2510 CONTINUE	CAM	00659
TERMS1=0.0	CAM	00660
IF(BSMEL.NE. 0.0) TERMS1=	CAM	00661
1 VRKBS*(1.-(1.-VRDBS)**(BSHEL/XNBAB))/(BSHEL/XNBAB)	CAM	00662
X5=AMAX1(0.0, 1.-TERMS1*(1.-VRDBNS)**(BTOTNS/XNBAB))	CAM	00663
TERMS2= 1.- X5*(RATP/XNBAB)	CAM	00664
BAKS=BTOTNS*TERMS2	CAM	00665
BSHELK(ID)=FBSK*BSHEL*TERMS2	CAM	00666
TERMN1=0.0	CAM	00667
IF(BTOTNS.GE. 1.0) TERMN1=	CAM	00668
1 VRKBNS*(1.-(1.-VRDBNS)**(BTOTNS/XNBAB))/AMIN1(BPARK,BTOTNS/XNBAB)	CAM	00669
XNS= AMAX1(0.0, 1.-TERMN1)	CAM	00670
TERMN2= 1.- XNS*(RATP/XNBAB)	CAM	00671
BAKNS= BTOTNS*TERMN2	CAM	00672
WRITE(MOT,33) ID, TERMS1,TERMS2,TERMN1,TERMN2	CAM	00673
WRITE(MOT,25) ID, BAKS,BSHELK(ID),BAKNS	CAM	00674
GO TO 2600	CAM	00675
2520 CONTINUE	CAM	00676
IF(BTOTNS.LT. 1.0) GO TO 2521	CAM	00677
IF(BTOTNS.LT. 1.0) GO TO 2522	CAM	00678
CS0=BSHEL/XNBAB	CAM	00679
CN0= BTOTNS/XNBAB	CAM	00680
CS1= 1.-(VRKBS/CS0)*(1.-(1.-VRDBS)**CS0)	CAM	00681
CS1= AMAX1(0.0,CS1)	CAM	00682
CS=CS1*(RATP/XNBAB)	CAM	00683
CN1= 1.-(VRKBNS/AMIN1(BPARK,CN0))*(1.-(1.-VRDBNS)**CN0)	CAM	00684
CN1= AMAX1(0.0, CN1)	CAM	00685
CN=CN1*(RATP/XNBAB)	CAM	00686
IF(CS.NE. 0.0) GO TO 2523	CAM	00687
IBZEX= 11	CAM	00688
Q= .0001	CAM	00689
GO TO 2525	CAM	00690
2523 IF(CN.NE. 0.0) GO TO 2524	CAM	00691
IBZEX= 12	CAM	00692
Q= .9999	CAM	00693
GO TO 2525	CAM	00694
2524 CONTINUE	CAM	00695
IBZEX= 20	CAM	00696
C1=BTOTNS*CN*ALOG(CN)/(BTOTNS*ALOG(CS))	CAM	00697
Q0=ALOG(C1)/(ALOG(CS)+ALOG(CN))	CAM	00698
Q= Q0	CAM	00699
IF(Q0.LE. 0.0) Q= 0.0	CAM	00700
IF(Q0.GE. 1.0) Q= 1.0	CAM	00701
2525 CONTINUE	CAM	00702
CS2= 1.-CS**Q	CAM	00703
BAKS=BTOTNS*CS2	CAM	00704
BSHELK(ID)=FBSK*BSHEL*CS2	CAM	00705
BAKNS=BTOTNS*(1.-CN**Q)	CAM	00706

WRITE(MOT,14) ID, (L(52,I),I=1,5),IR2EX	CAM	00707
WRITE(MOT,12) ID, (L(53,I),I=1,5),CS0,CS1,CS	CAM	00708
WRITE(MOT,12) ID, (L(54,I),I=1,5),CN0,CN1,CN	CAM	00709
WRITE(MOT,12) ID, (L(55,I),I=1,5),C1,00,0,CS2	CAM	00710
WRITE(MOT,25) ID, BAKS,BSHELK(ID),BAKNS	CAM	00711
GO TO 2600	CAM	00712
2521 BAKS=BSHELK(ID)*0.0	CAM	00713
CN1= 1.-(VRKHNS/AMIN1(BPARK,CN0))*(1.-(1.-VRDBNS)**CN0)	CAM	00714
CN1= AMAX1(0.0, CN1)	CAM	00715
CN=CN1**((RATP/XNBAB)	CAM	00716
BAKNS=BTOTNS*(1.-CN)	CAM	00717
IR2EX= 21	CAM	00718
WRITE(MOT,14) ID, (L(56,I),I=1,5),IR2EX	CAM	00719
WRITE(MOT,12) ID, (L(57,I),I=1,5),CN0,CN1,CN	CAM	00720
WRITE(MOT,25) ID, BAKS,BSHELK(ID),BAKNS	CAM	00721
GO TO 2600	CAM	00722
2522 BAKNS= 0.0	CAM	00723
CS1= 1.-(VRKHNS/CS0)*(1.-(1.-VRDBNS)**CS0)	CAM	00724
CS1= AMAX1(0.0, CS1)	CAM	00725
CS=CS1**((RATP/XNBAB)	CAM	00726
BAKNS=BTOTNS*(1.-CS)	CAM	00727
BSHELK(ID)= FBKS*BSHEL*(1.-CS)	CAM	00728
IR2EX= 22	CAM	00729
WRITE(MOT,14) ID, (L(58,I),I=1,5),IR2EX	CAM	00730
WRITE(MOT,12) ID, (L(59,I),I=1,5),CS0,CS1,CS	CAM	00731
WRITE(MOT,25) ID, BAKS,BSHELK(ID),BAKNS	CAM	00732
GO TO 2600	CAM	00733
2530 CONTINUE	CAM	00734
T=BTOTNS*BSHEL	CAM	00735
TERM1=(VRDBNS*BSHEL*VRDBNS*BTOTNS)/T	CAM	00736
TERM2=(1.-(1.-TERM1)**(T/XNBAB))/AMIN1(BPARK,(T/XNBAB))	CAM	00737
XS= AMAX1(0.0, 1.-VRKBS*TERM2)	CAM	00738
XNS= AMAX1(0.0, 1.-VRKHNS*TERM2)	CAM	00739
TERMS= 1. - XS**((RATP/XNBAB)	CAM	00740
TERMNS=1. - XNS**((RATP/XNBAB)	CAM	00741
BAKNS= BTOTNS*TERMS	CAM	00742
BSHELK(ID)= FBKS*BSHEL*TERMS	CAM	00743
BAKNS= BTOTNS*TERMNS	CAM	00744
WRITE(MOT,34) ID, T,TERM1,TERM2,TERMS,TERMNS	CAM	00745
WRITE(MOT,25) ID, BAKS,BSHELK(ID),BAKNS	CAM	00746
GO TO 2600	CAM	00747
2540 CONTINUE	CAM	00748
B4AN=(B4AN1*PRABA(1)+B4AN2*PRABA(2))/RATP	CAM	00749
B4AS=(B4AS1*PRABA(1)+B4AS2*PRABA(2))/RATP	CAM	00750
B4NS=(B4NS1*PRABA(1)+B4NS2*PRABA(2))/RATP	CAM	00751
B4SN=(B4SN1*PRABA(1)+B4SN2*PRABA(2))/RATP	CAM	00752
X4N=(1.-B4AL)*B4AN/B4B	CAM	00753
X4SN=(1.-B4AL)*B4AS*B4SN/B4B	CAM	00754
X4NS=(1.-B4AL)*B4AN*B4NS/B4B	CAM	00755
X4S=(1.-B4AL)*B4AS/B4B	CAM	00756
WRITE(MOT,12) ID, (L(60,I),I=1,5),B4AN,B4AS,B4NS,B4SN	CAM	00757
WRITE(MOT,12) ID, (L(61,I),I=1,5),X4N,X4NS,X4SN,X4S	CAM	00758
X4N= AMIN1(1.0,X4N)	CAM	00759
X4SN=AMIN1(1.0,X4SN)	CAM	00760
X4NS=AMIN1(1.0,X4NS)	CAM	00761
X4S=AMIN1(1.0,X4S)	CAM	00762
X4N=AMAX1(0.0,X4N)	CAM	00763
X4NS=AMAX1(0.0,X4NS)	CAM	00764

X4SN=AMAX1(0.0,X4SN)	CAM	00765
X4S=AMAX1(0.0,X4S)	CAM	00766
WRITE(MOT,12) ID, (L(62,I),I=1,5),X4N,X4NS,X4SN,X4S	CAM	00767
A1N= 1.+B4AL*B4AN*RATP/(B4B*XNBAB)	CAM	00768
A2N= (B4AL*RATP/(B4B*XNBAB))*(B4AS*B4SN-B4AN)	CAM	00769
A0B= RATP/XNBAB	CAM	00770
A3= (1.-X4N)**A0B	CAM	00771
A4= ((1.-X4SN)/(1.-X4N))**A0B	CAM	00772
A1S= B4AL*B4AN*RATP*B4NS/(B4B*XNBAB)+1.	CAM	00773
A2S= (B4AL*RATP/(B4B*XNBAB))*(B4AS-B4AN*B4NS)	CAM	00774
A2=A2S+A2N	CAM	00775
A5= (1.-X4NS)**A0B	CAM	00776
A6= ((1.-X4S)/(1.-X4NS))**A0B	CAM	00777
WRITE(MOT,35) ID, A1N,A1S,A2N,A2S,A2,A3,A4,A5,A6	CAM	00778
IF(BTOTLS.LT. .0001) IB4EX= 11	CAM	00779
IF(BTOTLS.LT. .0001) GO TO 2548	CAM	00780
IF(BTOTNS.LT. .0001) IB4EX= 12	CAM	00781
IF(BTOTNS.LT. .0001) GO TO 2549	CAM	00782
X0=F14(0.)	CAM	00783
X1=F14(1.)	CAM	00784
IF(X0.GE. 0. .AND. X1.GE. 0.) IB4EX= 22	CAM	00785
IF(X0.GE. 0. .AND. X1.GE. 0.) GO TO 2549	CAM	00786
IF(X0.LE. 0. .AND. X1.LE. 0.) IB4EX= 21	CAM	00787
IF(X0.LE. 0. .AND. X1.LE. 0.) GO TO 2548	CAM	00788
2541 CONTINUE	CAM	00789
USE NEWTONS METHOD	CAM	00790
IB4EX=30	CAM	00791
Q0= .5	CAM	00792
NTN=0	CAM	00793
2542 Q1=Q0-F14(Q0)/F24(Q0)	CAM	00794
IF(ABS(Q1-Q0).LT. EPS4) GO TO 2543	CAM	00795
IF(NTN.GT. 100) STOP 445	CAM	00796
Q0=Q1	CAM	00797
NTN= NTN+1	CAM	00798
GO TO 2542	CAM	00799
2543 Q= Q1	CAM	00800
WRITE(MOT,14) ID, (L(63,I),I=1,5),IB4EX	CAM	00801
WRITE(MOT,14) ID, (L(64,I),I=1,5),NTN,Q	CAM	00802
TERMS= A1S+A2S*Q-A5*A6**Q	CAM	00803
TERMNS=A1N+A2N*Q-A3*A4**Q	CAM	00804
WRITE(MOT,12) ID, (L(65,I),I=1,5),TERMS,TERMNS	CAM	00805
TERMS=AMIN1(1.0,TERMS)	CAM	00806
WRITE(MOT,12) ID, (L(66,I),I=1,5),TERMS,TERMNS	CAM	00807
BAKS= BTOTS*TERMS	CAM	00808
BSHELK(ID)= FB5K*BSHEL*TERMS	CAM	00809
BAKNS= BTOTNS*AMIN1(1.0,TERMNS)	CAM	00810
WRITE(MOT,25) ID, BAKS,BSHELK(ID),BAKNS	CAM	00811
GO TO 2600	CAM	00812
2548 CONTINUE	CAM	00813
USE ONLY ANTI-NONSHeltered-AIRCRAFT MUNITIONS	CAM	00814
TERMS= B4AL*B4AN*RATP*B4NS/(B4B*XNBAB)+1.- (1.-X4NS)**(RATP/XNBAB)	CAM	00815
TERMS= AMIN1(1.0,TERMS)	CAM	00816
TERMNS=B4AL*B4AN*RATP/(B4B*XNBAB)+1.- (1.-X4N)**(RATP/XNBAB)	CAM	00817
BAKS=BTOTS*TERMS	CAM	00818
	CAM	00819
	CAM	00820
	CAM	00821
	CAM	00822

HSHELK(ID)= FBSK*HSHEL*TERMS	CAN	00823
BAKNS=BTOTINS*AMINI(1.0,TERMNS)	CAN	00824
WRITE(MOT,14) ID, (L(67,I),I=1,5),IR4FX	CAN	00825
WRITE(MOT,12) ID, (L(68,I),I=1,5),TERMS,TERMNS	CAN	00826
WRITE(MOT,25) ID, BAKS,HSHELK(ID),BAKNS	CAN	00827
GO TO 2600	CAN	00828
2549 CONTINUE	CAN	00829
C	CAN	00830
C USE ONLY ANTI-SHELTER MUNITIONS	CAN	00831
C	CAN	00832
TERMS= (B4AL)*B44S*RATP/(B4B*XNBAB)+1.-(1.-X4S)**(RATP/XNBAB)	CAN	00833
TERMNS=AMINI(1.0,TERMS)	CAN	00834
TERMNS=B4AL*B44S*RATP*B4SN/(B4B*XNBAB)+1.-(1.-X4SN)**(RATP/XNBAB)	CAN	00835
BAKNS=HTOTS*TERMS	CAN	00836
HSHELK(ID)=FBSK*HSHEL*TERMS	CAN	00837
BAKNS=BTOTINS*AMINI(1.0,TERMNS)	CAN	00838
WRITE(MOT,14) ID, (L(69,I),I=1,5),IR4FX	CAN	00839
WRITE(MOT,12) ID, (L(70,I),I=1,5),TERMS,TERMNS	CAN	00840
WRITE(MOT,25) ID, BAKS,HSHELK(ID),BAKNS	CAN	00841
GO TO 2600	CAN	00842
2598 CONTINUE	CAN	00843
BAKNS=BAKNS+HSHELK(ID)=0.0	CAN	00844
IR4FX=40	CAN	00845
WRITE(MOT,14) ID, (L(71,I),I=1,5),IR4FX	CAN	00846
WRITE(MOT,25) ID, BAKS,HSHELK(ID),BAKNS	CAN	00847
2600 CONTINUE	CAN	00848
C	CAN	00849
C RED AIRBASES	CAN	00850
C	CAN	00851
C	CAN	00852
C COMPUTE NUMBER OF RED AIRCRAFT VULNERABLE TO ABA BY BLUE	CAN	00853
C IF IR3SH=1, DO NOT SHELTER RED SP ABA AIRCRAFT	CAN	00854
C	CAN	00855
HSHEL=HSHEL(ID)	CAN	00856
IF (HSHEL(ID) .LT. 1.) RSHEL=0.	CAN	00857
RAVUL(1)= HANAS	CAN	00858
DO 2601 MS=1,3	CAN	00859
RAVUL(1)=RAVUL(1)+RA(1,MS)+RANF(1,MS)+RAFB(1,MS)	CAN	00860
2601 CONTINUE	CAN	00861
DO 2602 KRA=2,4	CAN	00862
MS=KRA-1	CAN	00863
RAVUL(KRA)=RA(2,MS)+RAFB(2,MS)+RANF(2,MS)	CAN	00864
2602 CONTINUE	CAN	00865
WRITE(MOT,141) IBARA	CAN	00866
141 FORMAT(1H,50HRED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE	CAN	00867
1,15)	CAN	00868
WRITE(MOT,12) ID, (L(72,I),I=1,5),RAVUL	CAN	00869
ARQHAS=AMINI(ARQHA,RSHEL)	CAN	00870
HSHEL=RSHEL-ARQHAS	CAN	00871
WRITE(MOT,36) ID, ARQHA,ARQHAS,RSHEL,RSHEL1	CAN	00872
ARQHAN=ARQHA -ARQHAS	CAN	00873
XS= 1-IR3SH	CAN	00874
RAVULT=RAVUL(1) + RAVUL(2)+RAVUL(3)*XS + RAVUL(4)	CAN	00875
HSHEL1=AMINI(HSHEL1,RAVULT)	CAN	00876
WRITE(MOT,12) ID, (L(73,I),I=1,5),RAVULT,ARQHAN,RSHEL1	CAN	00877
IF (RAVULT .EQ. 0.0) GO TO 2605	CAN	00878
DO 2604 KRA=1,NKRA	CAN	00879
RPOPS(KRA)= RSHEL1*(RAVUL(KRA)/RAVULT)	CAN	00880

2604	CONTINUE	CAM	00881
	RPOPS(3)= XS*HPOPS(3)	CAM	00882
2605	CONTINUE	CAM	00883
	DO 2606 KRA=1,NKRA	CAM	00884
	RPOPNS(KRA)=RFHAC*(RAVUL(KRA)-RPOPS(KRA))	CAM	00885
	RPOPS(KRA)=RFHAC*RPOPNS(KRA)	CAM	00886
2606	CONTINUE	CAM	00887
	WRITE(MOT,12) IO, (L(74,I),I=1,5),RPOPS	CAM	00888
	WRITE(MOT,12) IO, (L(75,I),I=1,5),RPOPNS	CAM	00889
	RPOPS(1)=HPOPS(1)+ARWRAS	CAM	00890
	RPOPNS(1)=RPOPNS(1)+ARQHAN	CAM	00891
	WRITE(MOT,12) IO, (L(76,I),I=1,5),RPOPS	CAM	00892
	WRITE(MOT,12) IO, (L(77,I),I=1,5),RPOPNS	CAM	00893
	RTOTS=RTOTNS=0.0	CAM	00894
	DO 2607 KHA=1,4	CAM	00895
	RTOTS= RTOTS+RPOPS(KHA)	CAM	00896
	RTOTNS=RTOTNS+RPOPNS(KHA)	CAM	00897
2607	CONTINUE	CAM	00898
	RTOT=RTOTS+RTOTNS	CAM	00899
	WRITE(MOT,12) IO, (L(78,I),I=1,5),RTOTS,RTOTNS,RTOT	CAM	00900
C		CAM	00901
C	BLUE ATTACKERS--COMPUTE NUMBER OF BLUE ATTACK PASSES	CAM	00902
C		CAM	00903
	DO 2609 IYR=1,2	CAM	00904
	PBABATTYB= BS(TYB,2)*RPASS(TYB)	CAM	00905
2609	CONTINUE	CAM	00906
	BATP=PBABA(1)+PBABA(2)	CAM	00907
	WRITE(MOT,12) IO, (L(79,I),I=1,5),PRARA,BATP	CAM	00908
C		CAM	00909
C	CHECKS	CAM	00910
C		CAM	00911
	IF(BATP.LT. 1.0 .OR. RTOT.LT. 1.0) GO TO 2698	CAM	00912
C		CAM	00913
C	AVERAGE BLUE EFFECTIVENESS PARAMETERS	CAM	00914
C		CAM	00915
	VBURS = (BURS(1)*PBABA(1)+ BURS(2)*PBABA(2))/BATP	CAM	00916
	VBKRS = (BKRS(1)*PBABA(1)+ BKRS(2)*PBABA(2))/BATP	CAM	00917
	VBDRNS = (RDRNS(1)*PBABA(1)+BDRNS(2)*PBABA(2))/BATP	CAM	00918
	VBKRNS = (BKRNS(1)*PBABA(1)+BKRNS(2)*PBABA(2))/BATP	CAM	00919
	WRITE(MOT,37) IO, VBURS,VBKRS,VBDRNS,VBKRNS	CAM	00920
C		CAM	00921
C	USING APPROPRIATE BLUE ATTACK MODE, COMPUTE NUMBER OF RED AIRCRAFT	CAM	00922
C	KILLED	CAM	00923
C		CAM	00924
	GO TO (2610,2620,2630,2640), IPABA	CAM	00925
2610	CONTINUE	CAM	00926
	TERMS1=0.0	CAM	00927
	IF(RSMEL.NE. 0.0) TERMS1=	CAM	00928
	1 VBKRS*(1.-(1.-VBDRNS)**(RSMEL/XNRAB))/(RSMEL/XNRAB)	CAM	00929
	XS=AMAX1(0.0, 1.-TERMS1*(1.-VBDRNS)**(RTOTNS/XNRAB))	CAM	00930
	TERMS2= 1.- XS** (BATP/XNRAB)	CAM	00931
	RAKS=RTOTS*TERMS2	CAM	00932
	RSMELA(IO)=FHSK*RSMEL*TERMS2	CAM	00933
	TERMN1=0.0	CAM	00934
	IF(RTOTNS.GE. 1.0) TERMN1=	CAM	00935
	1 VBKRNS*(1.-(1.-VBDRNS)**(RTOTNS/XNRAB))/AMIN1(RPARK,RTOTNS/XNRAB)	CAM	00936
	XNS= AMAX1(0.0, 1.-TERMN1)	CAM	00937
	TERMN2= 1.- XNS** (BATP/XNRAB)	CAM	00938

	RAKNS= RTOTNS*TERMN2	CAM	00939
	WRITE(MOT,33) ID, TERMS1,TERMS2,TERMN1,TERMN2	CAM	00940
	WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	00941
	GO TO 2700	CAM	00942
2620	CONTINUE	CAM	00943
	IF(RTOTS.LT. 1.0) GO TO 2621	CAM	00944
	IF(RTOTNS.LT. 1.0) GO TO 2622	CAM	00945
	CS0=RSHEL/XNRAB	CAM	00946
	CN0= RTOTNS/XNRAB	CAM	00947
	CS1= 1.-(VBKRS/CS0)*(1.-(1.-VBDRS)**CS0)	CAM	00948
	CS1= AMAX1(0.0,CS1)	CAM	00949
	CS=CS1*(BATP/XNRAR)	CAM	00950
	CN1= 1.-(VBKRS/AMTN1(RPARK,CN0))*(1.-(1.-VBDRNS)**CN0)	CAM	00951
	CN1= AMAX1(0.0, CN1)	CAM	00952
	CN=CN1*(BATP/XNRAR)	CAM	00953
	IF(CS .NE. 0.0) GO TO 2623	CAM	00954
	IRZEX= 11	CAM	00955
	Q= .0001	CAM	00956
	GO TO 2625	CAM	00957
2623	IF(CN .NE. 0.0) GO TO 2624	CAM	00958
	IRZEX= 12	CAM	00959
	Q= .9999	CAM	00960
	GO TO 2625	CAM	00961
2624	CONTINUE	CAM	00962
	IRZEX= 20	CAM	00963
	C1=RTOTNS*CN*ALOG(CN)/(RTOTS*ALOG(CS))	CAM	00964
	Q0=ALOG(C1)/(ALOG(CS)+ALOG(CN))	CAM	00965
	Q= Q0	CAM	00966
	IF(Q0 .LE. 0.0) Q= 0.0	CAM	00967
	IF(Q0 .GE. 1.0) Q= 1.0	CAM	00968
2625	CONTINUE	CAM	00969
	CS2= 1.-CS**Q	CAM	00970
	RAKNS=RTOTS*CS2	CAM	00971
	RSHELK(ID)=FHSK*RSHEL*CS2	CAM	00972
	RAKNS=RTOTS*(1.-CN**Q)	CAM	00973
	WRITE(MOT,14) ID, ((80,I),I=1,5),IRZEX	CAM	00974
	WRITE(MOT,12) ID, ((81,I),I=1,5),CS0,CS1,CS	CAM	00975
	WRITE(MOT,12) ID, ((82,I),I=1,5),CN0,CN1,CN	CAM	00976
	WRITE(MOT,12) ID, ((83,I),I=1,5),C1,Q0,Q,CS2	CAM	00977
	WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	00978
	GO TO 2700	CAM	00979
2621	RAKNS=RSHELK(ID)=0.0	CAM	00980
	CN1= 1.-(VBKRS/AMTN1(RPARK,CN0))*(1.-(1.-VBDRNS)**CN0)	CAM	00981
	CN1= AMAX1(0.0, CN1)	CAM	00982
	CN=CN1*(BATP/XNRAR)	CAM	00983
	RAKNS=RTOTS*(1.-CN)	CAM	00984
	IRZEX= 21	CAM	00985
	WRITE(MOT,14) ID, ((84,I),I=1,5),IRZEX	CAM	00986
	WRITE(MOT,12) ID, ((85,I),I=1,5),CN0,CN1,CN	CAM	00987
	WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	00988
	GO TO 2700	CAM	00989
2622	RAKNS= 0.0	CAM	00990
	CS1= 1.-(VBKRS/CS0)*(1.-(1.-VBDRS)**CS0)	CAM	00991
	CS1= AMAX1(0.0,CS1)	CAM	00992
	CS=CS1*(BATP/XNRAR)	CAM	00993
	RAKNS=RTOTS*(1.-CS)	CAM	00994
	RSHELK(ID)= FHSK*RSHEL*(1.-CS)	CAM	00995
	IRZEX= 22	CAM	00996

WRITE(MOT,14) ID, (L(86,I),I=1,5),IR2FX	CAM	00997
WRITE(MOT,12) ID, (L(87,I),I=1,5),CS0,CS1,CS	CAM	00998
WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	00999
GO TO 2700	CAM	01000
2630 CONTINUE	CAM	01001
T=RTOTS*RSHEL	CAM	01002
TERM1=(VBORS*RSHEL+VBORS*RTOTS)/T	CAM	01003
TERM2=(1.-(1.-TERM1)**(T/XNRAB))/AMIN1(RPAK,(T/XNRAB))	CAM	01004
XS=AMAX1(0, 1.-VBKRS*TERM2)	CAM	01005
XNS=AMAX1(0, 1.-VBKRS*TERM2)	CAM	01006
TERMS=1.-XS** (RATP/XNRAB)	CAM	01007
TERMNS=1.-XNS** (RATP/XNRAB)	CAM	01008
RAKS=RTOTS*TERMS	CAM	01009
RSHELK(ID)=FKSK*RSHEL*TERMS	CAM	01010
RAKNS=RTOTS*TERMNS	CAM	01011
WRITE(MOT,34) ID, T,TERM1,TERM2,TERMS,TERMNS	CAM	01012
WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	01013
GO TO 2700	CAM	01014
2640 CONTINUE	CAM	01015
R4AN=(R4AN1*PBABA(1)+R4AN2*PBABA(2))/RATP	CAM	01016
R4AS=(R4AS1*PBABA(1)+R4AS2*PBABA(2))/RATP	CAM	01017
R4NS=(R4NS1*PBABA(1)+R4NS2*PBABA(2))/RATP	CAM	01018
R4SN=(R4SN1*PBABA(1)+R4SN2*PBABA(2))/RATP	CAM	01019
X4N=(1.-R4AL)*R4AN/R4B	CAM	01020
X4SN=(1.-R4AL)*R4AS/R4B	CAM	01021
X4NS=(1.-R4AL)*R4AN/R4B	CAM	01022
X4S=(1.-R4AL)*R4AS/R4B	CAM	01023
WRITE(MOT,12) ID, (L(88,I),I=1,5),R4AN,R4AS,R4NS,R4SN	CAM	01024
WRITE(MOT,12) ID, (L(89,I),I=1,5),X4N,X4NS,X4SN,X4S	CAM	01025
X4N=AMIN1(1.0,X4N)	CAM	01026
X4SN=AMIN1(1.0,X4SN)	CAM	01027
X4NS=AMIN1(1.0,X4NS)	CAM	01028
X4S=AMIN1(1.0,X4S)	CAM	01029
X4N=AMAX1(0.0,X4N)	CAM	01030
X4NS=AMAX1(0.0,X4NS)	CAM	01031
X4SN=AMAX1(0.0,X4SN)	CAM	01032
X4S=AMAX1(0.0,X4S)	CAM	01033
WRITE(MOT,12) ID, (L(90,I),I=1,5),X4N,X4NS,X4SN,X4S	CAM	01034
A1N=1.-R4AL*R4AN*RATP/(R4B*XNRAB)	CAM	01035
A2N=(R4AL*RATP/(R4B*XNRAB))*(R4AS*R4SN-R4AN)	CAM	01036
A0B=BATP/XNRAB	CAM	01037
A3=(1.-X4N)**A0B	CAM	01038
A4=(1.-X4SN)/(1.-X4N)**A0B	CAM	01039
A1S=R4AL*R4AN*BATP/R4NS/(R4B*XNRAB)+1.	CAM	01040
A2S=(R4AL*BATP/(R4B*XNRAB))*(R4AS-R4AN*R4NS)	CAM	01041
A2=A2S+A2N	CAM	01042
A5=(1.-X4NS)**A0B	CAM	01043
A6=(1.-X4S)/(1.-X4NS)**A0B	CAM	01044
WRITE(MOT,35) ID, A1N,A1S,A2N,A2S,A3,A4,A5,A6	CAM	01045
IF(RTOTS.LT..0001) IR4EX= 11	CAM	01046
IF(RTOTS.LT..0001) GO TO 2648	CAM	01047
IF(RTOTNS.LT..0001) IR4EX= 12	CAM	01048
IF(RTOTNS.LT..0001) GO TO 2649	CAM	01049
X0=F14(0.)	CAM	01050
X1=F14(1.)	CAM	01051
IF(X0.GE.0..AND.X1.GE.0.) IR4EX= 22	CAM	01052
IF(X0.GE.0..AND.X1.GE.0.) GO TO 2649	CAM	01053
IF(X0.LE.0..AND.X1.LE.0.) IR4EX= 21	CAM	01054

2641	IF(X0 .LE. 0. .AND. X1 .LE. 0.) GO TO 2648	CAM	01055
C	CONTINUE	CAM	01056
C	USE NEWTONS METHOD	CAM	01057
C		CAM	01058
	IR4EX=30	CAM	01059
	Q0=.5	CAM	01060
	NTN=0	CAM	01061
2642	Q1=Q0-F14(Q0)/F24(Q0)	CAM	01062
	IF(AHS(Q1-Q0) .LI. EPS4) GO TO 2643	CAM	01063
	IF(NTN .GT. 100) STOP 446	CAM	01064
	Q0=Q1	CAM	01065
	NTN=NTN+1	CAM	01066
	GO TO 2642	CAM	01067
2643	Q=Q1	CAM	01068
	WRITE(MOT,14) ID, (L(91,I),I=1,5),IR4EX	CAM	01069
	WRITE(MOT,14) ID, (L(92,I),I=1,5),NTN,Q	CAM	01070
	TERMS= A15+A25*Q-A5*A6**Q	CAM	01071
	TERMNS=A1N +A2N*Q-A3*A4**Q	CAM	01072
	WRITE(MOT,12) ID, (L(93,I),I=1,5),TERMS,TERMNS	CAM	01073
	TERMS=AMIN1(1.0,TERMS)	CAM	01074
	WRITE(MOT,12) ID, (L(94,I),I=1,5),TERMS,TERMNS	CAM	01075
	RAKS=RTOTS*TERMS	CAM	01076
	RSHELK(ID)=FMSK*RSHEL*TERMS	CAM	01077
	RAKNS=RTOTNS*AMIN1(1.0,TERMNS)	CAM	01078
	WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	01079
	GO TO 2700	CAM	01080
2648	CONTINUE	CAM	01081
C		CAM	01082
C	USE ONLY ANTI-NONSHeltered-AIRCRAFT MUNITIONS	CAM	01083
C		CAM	01084
	TERMS= R4AL*R4AN*BATP/R4B*XNRAB)+1.-(1.-X4NS)**(BATP/XNRAB)	CAM	01085
	TERMNS=AMIN1(1.0,TERMS)	CAM	01086
	TERMNS=R4AL*R4AN*BATP/(R4B*XNRAB)+1.-(1.-X4N)**(BATP/XNRAB)	CAM	01087
	RAKS=RTOTS*TERMS	CAM	01088
	RSHELK(ID)=FMSK*RSHEL*TERMS	CAM	01089
	RAKNS=RTOTNS*AMIN1(1.0,TERMNS)	CAM	01090
	WRITE(MOT,14) ID, (L(95,I),I=1,5),IR4EX	CAM	01091
	WRITE(MOT,12) ID, (L(96,I),I=1,5),TERMS,TERMNS	CAM	01092
	WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	01093
	GO TO 2700	CAM	01094
2649	CONTINUE	CAM	01095
C		CAM	01096
C	USE ONLY ANTI-SHELTER MUNITIONS	CAM	01097
C		CAM	01098
	TERMS= (R4AL)*R4AS*BATP/(R4B*XNRAB)+1.-(1.-X4S)**(BATP/XNRAB)	CAM	01099
	TERMNS=AMIN1(1.0,TERMS)	CAM	01100
	TERMNS=R4AL*R4AS*BATP/R4B*XNRAB)+1.-(1.-X4SN)**(BATP/XNRAB)	CAM	01101
	RAKS=RTOTS*TERMS	CAM	01102
	RSHELK(ID)=FMSK*RSHEL*TERMS	CAM	01103
	RAKNS=RTOTNS*AMIN1(1.0,TERMNS)	CAM	01104
	WRITE(MOT,14) ID, (L(97,I),I=1,5),IR4EX	CAM	01105
	WRITE(MOT,12) ID, (L(98,I),I=1,5),TERMS,TERMNS	CAM	01106
	WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	01107
	GO TO 2700	CAM	01108
2648	CONTINUE	CAM	01109
	RAKS=RAKNS=RSHELK(ID)=0.0	CAM	01110
	IR4EX=40	CAM	01111
		CAM	01112

WRITE(MOT,14) ID, (L(99,I),I=1,5),IR4FX	CAM	01113
WRITE(MOT,26) ID, RAKS,RSHELK(ID),RAKNS	CAM	01114
2700 CONTINUE	CAM	01115
C TOTAL AIRCRAFT DESTRUCTION	CAM	01116
C	CAM	01117
XS= 0.0	CAM	01118
IF(BTOTS .GT. .0001) XS=RAKS/BTOTS	CAM	01119
XNS= 0.0	CAM	01120
IF(RTOTNS .GT. .0001) XNS=BAKNS/RTOTNS	CAM	01121
BAD(1,ID)=XS*BPOPS(1)+XNS*BPOPNS(1)	CAM	01122
DO 2701 MS=1,3	CAM	01123
BAD(1,ID)=BAD(1,ID)+BAKAA(1,MS)+BAL(1,MS)	CAM	01124
2701 CONTINUE	CAM	01125
IF(NKBA .EQ. 1) GO TO 2703	CAM	01126
DO 2702 KBA=2,4	CAM	01127
MS=KBA-1	CAM	01128
BAD(KBA,ID)=XS*BPOPS(KBA)+XNS*BPOPNS(KBA)+BAKAA(2,MS)+BAL(2,MS)	CAM	01129
2702 CONTINUE	CAM	01130
2703 CONTINUE	CAM	01131
WRITE(MOT,150) ID	CAM	01132
150 FORMAT(1H0,34HTOTAL AIRCRAFT DESTRUCTION FOR DAY , 14)	CAM	01133
WRITE(MOT,12) ID, (L(100,I),I=1,5),BTOTS,BTOTNS,BTOT	CAM	01134
WRITE(MOT,12) ID, (L(101,I),I=1,5),XS,XNS	CAM	01135
WRITE(MOT,12) ID, (L(102,I),I=1,5),RAD(KBA,ID),KBA=1,4)	CAM	01136
XS= 0.0	CAM	01137
IF(BTOTS .GT. .0001) XS=RAKS/RTOTS	CAM	01138
XNS= 0.0	CAM	01139
IF(RTOTNS .GT. .0001) XNS=BAKNS/RTOTNS	CAM	01140
RAD(1,ID)=XS*RPOPS(1)+XNS*RPOPNS(1)	CAM	01141
DO 2706 MS=1,3	CAM	01142
RAD(1,ID)=RAD(1,ID)+BAKAA(1,MS)+RAL(1,MS)	CAM	01143
2706 CONTINUE	CAM	01144
IF(NKBA .EQ. 1) GO TO 2708	CAM	01145
DO 2707 KRA=2,4	CAM	01146
MS=KBA-1	CAM	01147
RAD(KRA,ID)=XS*RPOPS(KRA)+XNS*RPOPNS(KRA)+BAKAA(2,MS)+RAL(2,MS)	CAM	01148
2707 CONTINUE	CAM	01149
2708 CONTINUE	CAM	01150
WRITE(MOT,12) ID, (L(103,I),I=1,5),RTOTS,RTOTNS,RTOT	CAM	01151
WRITE(MOT,12) ID, (L(104,I),I=1,5),XS,XNS	CAM	01152
WRITE(MOT,12) ID, (L(105,I),I=1,5),RAD(KBA,ID),KBA=1,4)	CAM	01153
C	CAM	01154
C --- AIR FIREPOWER FOR ID -- H AND R	CAM	01155
C	CAM	01156
BAF(ID) = 0.0	CAM	01157
RAF(ID) = 0.0	CAM	01158
DO 2801 TY=1,2	CAM	01159
BAF(ID) = BAF(ID) + BS(TY,1)*FBA(TY)	CAM	01160
RAF(ID) = RAF(ID) + RS(TY,1)*FRA(TY)	CAM	01161
2801 CONTINUE	CAM	01162
C	CAM	01163
C TOTAL FIREPOWER FOR ID--R AND R	CAM	01164
C	CAM	01165
BF(ID)=BGF(ID)+BAF(ID)	CAM	01166
RF(ID)=RGF(ID)+RAF(ID)	CAM	01167
C	CAM	01168
C FEBA FOR ID	CAM	01169
C	CAM	01170

C	FRHR = RF(ID)/BF(ID)	CAM	01171
	IF (RF(ID) .LT. RF(ID)) GO TO 2802	CAM	01172
	CALL CVFX (NFRFA, FRFA, FA, FRBR, DFERA)	CAM	01173
	GO TO 2805	CAM	01174
2802	CONTINUE	CAM	01175
	FRHR = RF(ID)/BF(ID)	CAM	01176
	CALL CVFX(NFRFA,FRFA,FA,FRBR,DFERA)	CAM	01177
	DFERA=DFERA	CAM	01178
2805	CONTINUE	CAM	01179
	IF (ID-1) 2810,2810,2820	CAM	01180
2810	FEBA(ID)=DFERA	CAM	01181
	GO TO 2850	CAM	01182
2820	IDM1=ID-1	CAM	01183
	FEBA(ID)=FEBA(IDM1)+DFERA	CAM	01184
C		CAM	01185
C	--- DIVISION DESTRUCTION FOR ID	CAM	01186
C		CAM	01187
2850	CONTINUE	CAM	01188
	IF (IKEPLB .EQ. 0) GO TO 2851	CAM	01189
	BDD(1,ID)=BDD(2,ID)+BDD(3,ID)+BDD(4,ID)=0.0	CAM	01190
	GO TO 2855	CAM	01191
2851	CALL CVFX(NFRBD,FRBD,BD,FRBR,PRDID)	CAM	01192
	DO 2852 KBD=1,NKBD	CAM	01193
2852	BDD(KBD,ID)=BDI(KBD,ID)*PRDID	CAM	01194
2855	IF (IKEPLB .EQ. 0) GO TO 2856	CAM	01195
	RDD(1,ID)=RDD(2,ID)+RDD(3,ID)+RDD(4,ID)=0.0	CAM	01196
	GO TO 2860	CAM	01197
2856	CALL CVFX(NFRRD,FRRD,RD,FRBR,PRDID)	CAM	01198
	DO 2857 KRD=1,NKRD	CAM	01199
2857	RDD(KRD,ID) = RDI(KRD,ID)*PRDID	CAM	01200
2860	CONTINUE	CAM	01201
C		CAM	01202
C	--- CUMULATIVE TOTAL AND AIR FIREPOWER -- R AND P	CAM	01203
C		CAM	01204
2870	IF (ID-1) 2875,2875,2880	CAM	01205
2875	CBF(ID)=BF(ID)	CAM	01206
	CRF(ID) = RF(ID)	CAM	01207
	CBAF(ID) = BAF(ID)	CAM	01208
	CRAF(ID) = RAF(ID)	CAM	01209
	GO TO 2900	CAM	01210
C		CAM	01211
2880	IDM1=ID-1	CAM	01212
	CBF(ID) = CBF(IDM1) + BF(ID)	CAM	01213
	CRF(ID) = CRF(IDM1) + RF(ID)	CAM	01214
	CBAF(ID) = CBAF(IDM1) + BAF(ID)	CAM	01215
	CRAF(ID) = CRAF(IDM1) + RAF(ID)	CAM	01216
2900	CONTINUE	CAM	01217
C		CAM	01218
C	--- END OF DO LOOP ON ID	CAM	01219
C		CAM	01220
3000	CONTINUE	CAM	01221
C		CAM	01222
C	PRINT RESULTS OVER WHOLE WAR	CAM	01223
	CALL PRINTS	CAM	01224
C		CAM	01225
9999	CONTINUE	CAM	01226
	RETURN	CAM	01227
		CAM	01228

END

CAM 01229

E. SUBROUTINE CVFX

Subroutine CVFX is the same as in the game program (a listing appears in Vol. 2, Ch. IV, Sec. H).

F. SUBROUTINE CAMCLR

Subroutine CAMCLR is the same as in the game program (a listing appears in Vol. 2, Ch. IV, Sec. I).

G. SUBROUTINE PRINTS

SUBROUTINE PRINTS		PRINTS 00002
COUDDIM	COMMON NKBU,NKBU,NKRA,NKRA	MATN
	COMMON NID	MATN
	COMMON NPD,IDL1,IDU1,IDL2,IDU2,IDL3,IDU3	MATN
	COMMON IR0,JR0,KR0	MATN
	COMMON IPRV,TPHU	MATN
	COMMON IREPLR,IKEPLR	MATN
	COMMON BDA(3,90),HDA(3,90)	MATN
	COMMON BAA(4,90),RAA(4,90)	MATN
	COMMON DBQHA,DBQHA	MATN
	COMMON SHEL(90),SHEL(90),PBSHEL,PRSHEL	MATN
	COMMON BSHELK(90),RSHELK(90)	MATN
	COMMON FBD(3),FRD(3),FBA(2),FRA(2)	MATN
	COMMON IDBSKC,IDBSKC	MATN
	COMMON SORRB1(2,3),SORRB2(2,3),SORRR1(2,3),SORRR2(2,3)	MATN
	COMMON IAA,XNBAA,XNRRA,BALPHA(2,2),RALPHA(2,2)	MATN
	COMMON BIDRA(2,4),BADRI(4,2),RIDBA(2,4),RADBI(4,2)	MATN
	COMMON BIKRA(2,4),BAKRI(4,2),RIKBA(2,4),RAKBI(4,2)	MATN
	COMMON BSAMZK(2,2),RSAMZB(2,2)	MATN
	COMMON IR3SH,BFRAC1,BFRAC2,RFRAC1,RFRAC2,FBSK,FRSK	MATN
	COMMON BPASS(2),RPASS(2)	MATN
	COMMON IBABA,IMABA,XNBAH,XNRAB,BPARK,RPARK	MATN
	COMMON BORS(2),BORNS(2),BKRS(2),BKNS(2)	MATN
	COMMON RORS(2),RODNS(2),RKBS(2),RKNS(2)	MATN
	COMMON B4B,B4AL,B4AN1,B4AN2,B4AS1,B4AS2,B4NS1,B4NS2,B4SN1,B4SN2	MATN
	COMMON R4B,R4AL,R4AN1,R4AN2,R4AS1,R4AS2,R4NS1,R4NS2,R4SN1,R4SN2	MATN
	COMMON EPS4	MATN
	COMMON NFRFA,FHFA(15),FA(15)	MATN
	COMMON NFRBD,FRBD(15),BD(15)	MATN
	COMMON NFRKD,FKKD(15),KD(15)	MATN
	COMMON NB,NR	MATN
	COMMON PB(20,3),PH(20,3)	MATN
	COMMON PROPB(3,3),PROPR(3,3)	MATN
	COMMON MOE,MOET	MATN
	COMMON BCWGT,BSWGT(3),BCWGT(2),RCWGT,RSWGT(3),RCWGT(2)	MATN
	COMMON GVA	MATN
C	COMMON BDI(3,90),HDI(3,90)	MATN
	COMMON BDD(3,90),RDN(3,90)	MATN
	COMMON BGF(90),RGF(90)	MATN
	COMMON BAI(4,90),RAI(4,90)	MATN
	COMMON BAD(4,90),HAD(4,90)	MATN
	COMMON BAF(90),RAF(90)	MATN
	COMMON BF(90),RF(90)	MATN
	COMMON FEB(90)	MATN
	COMMON CBF(90),CRF(90)	MATN
	COMMON CBAF(90),CRAF(90)	MATN
C		MATN
COUDDIM	DIMENSION L1(57),L2(57)	PRINTS 00003
	DATA L1/ 3*4HBDA(,3*4HBDI(,3*4HBDD(,3HGF,4*4HBAA(,4*4HBAI(,	PRINTS 00004
	4*4HBAD(,4HSHEL,4HSHE,3HBAF,2HBF,	PRINTS 00005
	X 3*4HDDA(,3*4HDDI(,3*4HDDU(,3HGF,4*4HRAA(,4*4HRAI(,	PRINTS 00006
	4*4HRAO(,4HSHEL,4HSHE,3HRAF,2HMF,	PRINTS 00007
	4HFEDA,3HCBF,3HCRF,4HCAF,4HCRAF /	PRINTS 00008
	DATA L2/ 2H1,,2H2,,2H3,,2H1,,2H2,,2H3,,2H1,,2H2,,2H3,,1H,,2H1,,	PRINTS 00009
		PRINTS 00010

A2H2,,2H3,,2H4,,2H1,,2H2,,2H3,,2H4,,2H1,,2H2,,2H3,,2H4,,14B,2HLK,	PRINTS	00011
A2*1H , 2H1,,2H2,,2H3,,2H1,,2H2,,2H3,,2H1,,2H2,,2H3,,1H ,2H1,,	PRINTS	00012
A2H2,,2H3,,2H4,,2H1,,2H2,,2H3,,2H4,,2H1,,2H2,,2H3,,2H4,,1HR,2HLK,	PRINTS	00013
A 7*1H /	PRINTS	00014
MOT=6	PRINTS	00015
WRITE(MOT,156)	PRINTS	00016
156 FORMAT(1H1,2AHSTRATEGIES,BY PERIOD /1H ,15X, 10H BLUE ,30X,	PRINTS	00017
1 6H RFD /1H ,30H CAS ABA INT ,10X,	PRINTS	00018
2 30H CAS ABA INT)	PRINTS	00019
DO 57 IPD=1,3	PRINTS	00020
WRITE(MOT,54) IPD,(PROPR(MS,IPD),MS=1,3),(PROPR(MS,IPD),MS=1,3)	PRINTS	00021
56 FORMAT(1H ,12,3F10.4,10X,3F10.4)	PRINTS	00022
57 CONTINUE	PRINTS	00023
WRITE(MOT,1)	PRINTS	00024
1 FORMAT(1H1/)	PRINTS	00025
700 FORMAT(1H0,2A4,10F12.3/(1H ,8X,10F12.3))	PRINTS	00026
K=1	PRINTS	00027
WRITE(MOT,700) L1(K),L2(K), (BDA(1,ID),ID=1,NID)	PRINTS	00028
K=K+1	PRINTS	00029
WRITE(MOT,700) L1(K),L2(K), (BDA(2,ID),ID=1,NID)	PRINTS	00030
K=K+1	PRINTS	00031
WRITE(MOT,700) L1(K),L2(K), (BDA(3,ID),ID=1,NID)	PRINTS	00032
K=K+1	PRINTS	00033
WRITE(MOT,700) L1(K),L2(K), (BDI(1,ID),ID=1,NID)	PRINTS	00034
K=K+1	PRINTS	00035
WRITE(MOT,700) L1(K),L2(K), (BDI(2,ID),ID=1,NID)	PRINTS	00036
K=K+1	PRINTS	00037
WRITE(MOT,700) L1(K),L2(K), (BDI(3,ID),ID=1,NID)	PRINTS	00038
K=K+1	PRINTS	00039
WRITE(MOT,700) L1(K),L2(K), (BDD(1,ID),ID=1,NID)	PRINTS	00040
K=K+1	PRINTS	00041
WRITE(MOT,700) L1(K),L2(K), (BDD(2,ID),ID=1,NID)	PRINTS	00042
K=K+1	PRINTS	00043
WRITE(MOT,700) L1(K),L2(K), (BDD(3,ID),ID=1,NID)	PRINTS	00044
K=K+1	PRINTS	00045
WRITE(MOT,700) L1(K),L2(K), (HGF(ID),ID=1,NID)	PRINTS	00046
K=K+1	PRINTS	00047
WRITE(MOT,700) L1(K),L2(K), (BAA(1,ID),ID=1,NID)	PRINTS	00048
K=K+1	PRINTS	00049
WRITE(MOT,700) L1(K),L2(K), (BAA(2,ID),ID=1,NID)	PRINTS	00050
K=K+1	PRINTS	00051
WRITE(MOT,700) L1(K),L2(K), (BAA(3,ID),ID=1,NID)	PRINTS	00052
K=K+1	PRINTS	00053
WRITE(MOT,700) L1(K),L2(K), (BAA(4,ID),ID=1,NID)	PRINTS	00054
K=K+1	PRINTS	00055
WRITE(MOT,700) L1(K),L2(K), (BAI(1,ID),ID=1,NID)	PRINTS	00056
K=K+1	PRINTS	00057
WRITE(MOT,700) L1(K),L2(K), (BAI(2,ID),ID=1,NID)	PRINTS	00058
K=K+1	PRINTS	00059
WRITE(MOT,700) L1(K),L2(K), (BAI(3,ID),ID=1,NID)	PRINTS	00060
K=K+1	PRINTS	00061
WRITE(MOT,700) L1(K),L2(K), (BAI(4,ID),ID=1,NID)	PRINTS	00062
K=K+1	PRINTS	00063
WRITE(MOT,700) L1(K),L2(K), (BAD(1,ID),ID=1,NID)	PRINTS	00064
K=K+1	PRINTS	00065
WRITE(MOT,700) L1(K),L2(K), (BAD(2,ID),ID=1,NID)	PRINTS	00066
K=K+1	PRINTS	00067
WRITE(MOT,700) L1(K),L2(K), (BAD(3,ID),ID=1,NID)	PRINTS	00068


```

K=K+1
WRITE(MOT,700) L1(K),L2(K), ( BAD(4,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( SHELK(ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( BSHELK(ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( BAF(ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RF(ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RUA(1,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDA(2,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDA(3,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDI(1,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDI(2,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDI(3,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDD(1,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDD(2,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RDD(3,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RGF(ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAA(1,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAA(2,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAA(3,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAA(4,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAI(1,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAI(2,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAI(3,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( HAI(4,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RAD(1,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RAD(2,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RAD(3,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( RAD(4,ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( SHELK(ID),IU=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( BSHELK(ID),IU=1,NID)

```

```

PRINTS 00069
PRINTS 00070
PRINTS 00071
PRINTS 00072
PRINTS 00073
PRINTS 00074
PRINTS 00075
PRINTS 00076
PRINTS 00077
PRINTS 00078
PRINTS 00079
PRINTS 00080
PRINTS 00081
PRINTS 00082
PRINTS 00083
PRINTS 00084
PRINTS 00085
PRINTS 00086
PRINTS 00087
PRINTS 00088
PRINTS 00089
PRINTS 00090
PRINTS 00091
PRINTS 00092
PRINTS 00093
PRINTS 00094
PRINTS 00095
PRINTS 00096
PRINTS 00097
PRINTS 00098
PRINTS 00099
PRINTS 00100
PRINTS 00101
PRINTS 00102
PRINTS 00103
PRINTS 00104
PRINTS 00105
PRINTS 00106
PRINTS 00107
PRINTS 00108
PRINTS 00109
PRINTS 00110
PRINTS 00111
PRINTS 00112
PRINTS 00113
PRINTS 00114
PRINTS 00115
PRINTS 00116
PRINTS 00117
PRINTS 00118
PRINTS 00119
PRINTS 00120
PRINTS 00121
PRINTS 00122
PRINTS 00123
PRINTS 00124
PRINTS 00125
PRINTS 00126

```

```

K=K+1
WRITE(MOT,700) L1(K),L2(K), (   RAF(ID),ID=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), (   RF(ID),ID=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( FEHA(ID),ID=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), (   CHF(ID),ID=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), (   CRF(ID),ID=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( CBAF(ID),ID=1,NID)
K=K+1
WRITE(MOT,700) L1(K),L2(K), ( CRAF(ID),ID=1,NID)
C
RETURN
END

```

```

PRINTS 00127
PRINTS 00128
PRINTS 00129
PRINTS 00130
PRINTS 00131
PRINTS 00132
PRINTS 00133
PRINTS 00134
PRINTS 00135
PRINTS 00136
PRINTS 00137
PRINTS 00138
PRINTS 00139
PRINTS 00140
PRINTS 00141
PRINTS 00142
PRINTS 00143

```


Chapter III

SAMPLE OUTPUT

The same sample problem as in Volume 2 has been used: a two--period, 30-day war with allocation changes on days 1 and 11. The optimal strategy for this game (that was found by the game program) was put through the print-run program to determine the levels of various variables through the course of the war if both sides play optimally. Observe that in the third section of the output (Sec. C of this chapter, below) that the variable FEBA(30)--which is the last entry in the 13th line from the bottom--is 4.167, which is the game value found by the game program (Vol. 2, Ch. V, Sec. C1 or C2). The values of the second two measures of effectiveness when the strategy optimal for FEBA position is played can be found from this output. In Section C, CBF(30) \approx 2350 (last entry, 10th line from the bottom) and CRF(30) \approx 2460 (last entry, seventh line from the bottom); hence, the second MOE is $2350 - 2460 = -110$ firepower units. Similarly, CBAF(30) \approx 555 (last entry, fourth line from the bottom) and CRAF(30) \approx 1393 (last entry, bottom line); hence, the third MOE is $555 - 1393 = -838$ firepower units.

The optimal strategy for the sample problem (optimizing on FEBA position--i.e., MOE = 1) is for Blue and Red both to play pure strategy 6 (all INT) in the first period and for Blue to play pure strategy 2 (half CAS, half ABA) and Red to play pure strategy 1 (all CAS) in the second period. In the print-run output, these pure strategies show up as the allocations for periods 2 and 3, respectively. The variables PROPB(MS,1) and PROPR(MS,1) are not used in a two-period war.

A. SAMPLE OUTPUT OF INPUT VARIABLES

NKBD,NKRD,NKBA,NKRA			
3	3	4	4
NID			
30			
NPD,IDL2,IDL3			
2	1	11	
IR0,JR0,KR0			
-0	6	1	
IPRV,IPRU			
1	1		
IREPLB,IREPLR			
0	0		

BQA (KBD, ID)

24.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	6.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	6.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
12.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	3.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
10.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	3.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0

RDA (KRD, ID)

80.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	20.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
40.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	10.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
10.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	2.0	-0.0	-0.0	-0.0	-0.0
-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0

BAA (KBA, ID)

1500	-0	-0	-0	75	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	75	-0	-0	-0	-0	-0	-0
-0	-0	-0	75	-0	-0	-0	-0
300	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
200	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	40	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
200	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0

RAA (KRA, ID)

2500	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
300	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
400	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
500	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0
-0	-0	-0	-0	-0	-0	-0	-0

DBQRA, DRQRA

200.0	200.0
PBSHEL	
1000	
PRSHEL	
2000	
FBD(KBD)	
10.0	8.0 6.0
FRD(KRD)	
6.0	5.0 4.0
(FBA(KBA),KBA=1,2)	
.10000	.15000
(FRA(KRA),KRA=1,2)	
.06000	.08000
IDBSRC, IDRSRC	
5	4
((SORRB1(TY,MS),MS=1,3),TY=1,2)	
2.0000	2.5000 2.5000
2.0000	3.0000 1.5000
((SORRB2(TY,MS),MS=1,3),TY=1,2)	
1.0000	1.5000 1.0000
.7000	1.0000 .6000
((SORRR1(TY,MS),MS=1,3),TY=1,2)	
3.0000	2.5000 2.5000
3.0000	2.0000 2.0000
((SORRR2(TY,MS),MS=1,3),TY=1,2)	
1.7000	1.5000 1.5000
1.7000	1.0000 .8000
IAA	
1	
XNBAA,XNRAA	
1.0	1.0
((BALPHA(TY,MS),MS=1,2),TY=1,2)	
.80000	.60000
.80000	.60000
((TRALPHA(TY,MS),MS=1,2),TY=1,2)	
.50000	.40000
.50000	.40000
((BIDRA(TYI,KAT),KAT=1,4),TYI=1,2)	
.00100	.00100 .00100 .00100
.00150	.00150 .00200 .00200
((BIKRA(TYI,KAT),KAT=1,4),TYI=1,2)	
.30000	.30000 .30000 .30000
.50000	.50000 .50000 .50000
((BADRI(KAT,TYI),TYI=1,2),KAT=1,4)	
.00100	.00100
.00100	.00100
.00100	.00100
.00100	.00100
((BAKRI(KAT,TYI),TYI=1,2),KAT=1,4)	
.10000	.10000
.10000	.10000
.10000	.10000
.10000	.10000

((RIUBA(TYI,KAI),KAT=1,4),TYI=1,2)			
.00050	.00050	.00050	.00050
.00100	.00100	.00100	.00100
((RIKBA(TYI,KAT),KAT=1,4),TYI=1,2)			
.20000	.20000	.20000	.20000
.30000	.30000	.30000	.30000
((RADBI(KAT,TYI),TYI=1,2),KAT=1,4)			
.00050	.00050		
.00050	.00050		
.00050	.00050		
.00050	.00050		
((RAKBI(KAT,TYI),TYI=1,2),KAT=1,4)			
.10000	.10000		
.10000	.10000		
.10000	.10000		
.10000	.10000		
((BSAMZR(TY,MS),MS=1,2),TY=1,2)			
.0500	.1000		
.0500	.1000		
((RSAMZB(TY,MS),MS=1,2),TY=1,2)			
.0500	.1000		
.0500	.1000		
IR3SH			
1			
BFRAC1,BFRAC2			
.800	.900		
RFRAC1,RFRAC2			
.700	.900		
FBSK,FRSK			
1.000	.500		
(BPASS(TY),TY=1,2)			
1.00	1.00		
(RPASS(TY),TY=1,2)			
1.00	1.00		
IBABA--BLUE ATTACKS RED AIRBASE USING MODE 1			
IRABA--RED ATTACKS BLUE AIRBASE USING MODE 1			
XNBAB,XNRAB			
20.0	20.0		
BPARK,RPARK			
10000.0	10000.0		
B GP B SP ABA			
BORS	.01000	.01000	
BDRNS	.02000	.02000	
BKRS	.40000	.40000	
BKRNS	.60000	.60000	
R GP R SP ABA			
RDBS	.01000	.01000	
RDBNS	.02000	.02000	
RKBS	.20000	.20000	

RKBNS .30000 .30000

B4B,B4AL,B4AN1,B4AN2,B4AS1,B4AS2,B4NS1,B4NS2,B4SN1,B4SN2
1000000.0 0.0000 10000.0 20000.0 15000.0 15000.0 0.0000 0.0000 1.0000 1.0000

R4B,R4AL,R4AN1,R4AN2,R4AS1,R4AS2,R4NS1,R4NS2,R4SN1,R4SN2
1000000.0 0.0000 10000.0 20000.0 15000.0 15000.0 0.0000 0.0000 1.0000 1.0000

EP34

.00010

NFRFA,FRFA(I),FA(I)

11								
.10	.20	.33	.50	.67	1.00	1.50	2.00	
3.00	5.00	10.00						
-60.0	-40.0	-20.0	-10.0	-2.0	0.0	2.0	10.0	
20.0	40.0	60.0						

NFRBD,FRBD(I),BD(I)

11								
.10	.20	.33	.50	.67	1.00	1.50	2.00	
3.00	5.00	10.00						
.020	.014	.010	.009	.008	.008	.008	.007	
.005	.003	.002						

NFRRU,FRRU(I),RU(I)

11								
.10	.20	.33	.50	.67	1.00	1.50	2.00	
3.00	5.00	10.00						
.002	.003	.005	.007	.008	.008	.008	.009	
.010	.014	.020						

NB, NR		
6	6	
PB(IA, MS), MS=1,3)		
1.000	0.000	0.000
.500	.500	0.000
0.000	1.000	0.000
.500	0.000	.500
0.000	.500	.500
0.000	0.000	1.000
PR(IA, MS), MS=1,3)		
1.000	0.000	0.000
.500	.500	0.000
0.000	1.000	0.000
.500	0.000	.500
0.000	.500	.500
0.000	0.000	1.000

MOE,MOET		
1	30	
BCWGT		
0.000		
(BSWGT(MS),MS=1,3)		
1.000	1.000	1.000
(BQWGT(I),I=1,2)		
1.000	0.000	
RCWGT		
0.000		
(RSWGT(MS),MS=1,3)		
0.000	0.000	0.000
(RQWGT(I),I=1,2)		
0.000	0.000	
GVA		
10000		

B. DAILY RESULTS

STRATEGIES	BY PERIOD			BLUE			RED		
	CAS	ABA	INT	CAS	ABA	INT	CAS	ABA	INT
1	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
2	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000
3	.5000	.5000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000

BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY									
1	HS(TY,MS)	0.00000	0.00000	320.00000	400.00000	600.00000	800.00000	300.00000	300.00000
1	BA(TY,MS)	0.00000	0.00000	1300.00000	300.00000	200.00000	200.00000	200.00000	200.00000
1	BANAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	MANF(TY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
RED SORTIES AND AIRCRAFT AT BEGINNING OF DAY									
1	RS(TY,MS)	0.00000	0.00000	570.00000	900.00000	800.00000	1000.00000	1000.00000	1000.00000
1	RA(TY,MS)	0.00000	0.00000	2300.00000	300.00000	400.00000	500.00000	500.00000	500.00000
1	BANAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	RANF(TY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION									
1	IRINA,IBARI	0	0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	RATS,RATSI	1700.00000	1700.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	BITS,BITSI	3550.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	VRIUBA(TYI)	.00050	.00100	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	VRAUBI(KAT)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	REFMG(TY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	DENOM	3.87500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	BPENG(TY)	.R4416	.15584	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	BSKAA(TY,MS)	0.00000	0.00000	64.64185	273.09039	273.09039	11.93388	11.93388	11.93388
1	BAKAA(TY,MS)	0.00000	0.00000	25.85674	136.54519	91.03013	7.95592	7.95592	7.95592
1	HSPH(TY,MS)	0.00000	0.00000	0.00000	57.63524	115.35048	0.00000	0.00000	0.00000
1	HSPB(TY,MS)	0.00000	0.00000	0.00000	28.83762	38.45016	0.00000	0.00000	0.00000
1	HS(TY,MS)	0.00000	0.00000	3185.35815	269.23437	211.55913	288.06612	288.06612	288.06612
1	BA(TY,MS)	0.00000	0.00000	1274.14326	134.61719	70.51971	192.04408	192.04408	192.04408
ATTRITION TO RED IN AIR-TO-AIR INTERACTION									
1	RATS,RATSI	1200.00000	1200.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	BITS,BITSI	6750.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	VRIUBA(TYI)	.00100	.00200	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	VRAUBI(KAT)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	RSENG(TY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	DENOM	3.87500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	BPENG(TY)	.74194	.25806	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
1	RSKAA(TY,MS)	0.00000	0.00000	24.99432	382.91664	340.37035	8.69368	8.69368	8.69368
1	RAKAA(TY,MS)	0.00000	0.00000	9.99773	137.63888	170.18517	4.34684	4.34684	4.34684
1	RSPB(TY,MS)	0.00000	0.00000	0.00000	179.06940	191.00736	0.00000	0.00000	0.00000
1	RSPB(TY,MS)	0.00000	0.00000	0.00000	5.68940	95.50368	0.00000	0.00000	0.00000
1	RS(TY,MS)	0.00000	0.00000	5725.00564	338.01396	268.62229	991.30632	991.30632	991.30632
1	BA(TY,MS)	0.00000	0.00000	2290.00227	112.67132	134.31115	495.65316	495.65316	495.65316
BLUE LOSSES TO ENEMY SAMS									
1	BSL(TY,MS)	0.00000	0.00000	0.00000	13.46172	21.15591	0.00000	0.00000	0.00000
1	BS(TY,MS)	0.00000	0.00000	0.00000	6.73086	7.05197	0.00000	0.00000	0.00000
1	BA(TY,MS)	0.00000	0.00000	3185.35815	255.72255	190.40332	288.06612	288.06612	288.06612
1	BA(TY,MS)	0.00000	0.00000	1274.14326	127.88633	63.66774	192.04408	192.04408	192.04408
RED LOSSES TO ENEMY SAMS									
1	RSL(TY,MS)	0.00000	0.00000	0.00000	16.90070	26.86223	0.00000	0.00000	0.00000
1	RAL(TY,MS)	0.00000	0.00000	0.00000	5.63357	13.43111	0.00000	0.00000	0.00000
1	RS(TY,MS)	0.00000	0.00000	5725.00564	321.11326	241.76006	991.30632	991.30632	991.30632
1	RA(TY,MS)	0.00000	0.00000	2290.00227	107.03775	120.88003	495.65316	495.65316	495.65316
BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE									
1	RAVUL(KBA)	1274.14326	156.72395	101.91790	192.04408	192.04408	192.04408	192.04408	192.04408
1	AFORA,AFORAS,BSHEL,RSHEL1	200.00000	200.00000	1000.00000	800.00000	800.00000	800.00000	800.00000	800.00000
1	RAVUL,ABGRAN,RSHEL1	1724.82919	0.00000	800.00000	800.00000	800.00000	800.00000	800.00000	800.00000
1	BPOPS(KBA)	472.77243	58.15261	37.81676	82.37707	82.37707	82.37707	82.37707	82.37707
1	BPOPS(KBA)	546.54218	67.22654	43.17564	82.37707	82.37707	82.37707	82.37707	82.37707

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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2	2	MSKAA(TV,MS)	74262	0.00000	0.00000	0.00000	12.81464	256.38653	215.78077	4.44143
2	2	RAKAA(TV,MS)	0.00000	0.00000	0.00000	0.00000	5.12585	85.46218	107.89039	2.22072
2	2	RSFB(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	91.72981	92.64229	0.00000
2	2	RAF8(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	10.57660	46.32114	0.00000
2	2	RS(TV,MS)	0.00000	0.00000	0.00000	0.00000	5573.40679	140.34002	102.67299	963.62466
2	2	RA(TV,MS)	0.00000	0.00000	0.00000	0.00000	2259.36272	46.78001	51.33650	481.81233
BLUE LOSSES TO ENEMY SAMS										
2	2	BSL(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	6.20047	9.39523	0.00000
2	2	BAL(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	3.10024	3.13174	0.00000
2	2	BS(TV,MS)	0.00000	0.00000	0.00000	0.00000	3063.92228	117.80894	84.95710	274.09714
2	2	BA(TV,MS)	0.00000	0.00000	0.00000	0.00000	1225.56884	58.90447	28.18570	182.73143
RED LOSSES TO ENEMY SAMS										
2	2	RSL(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	7.01700	10.26730	0.00000
2	2	RAL(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	2.33900	5.13365	0.00000
2	2	RS(TV,MS)	0.00000	0.00000	0.00000	0.00000	5573.40679	133.32302	92.40569	963.62466
2	2	RA(TV,MS)	0.00000	0.00000	0.00000	0.00000	2259.36272	44.44101	46.20285	481.81233

BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE 1

2	2	BAVUL(KRA)	1225.46888	72.75087	46.19434	182.73143
2	2	ARGRA,ARGRAS,BSHEL,RSHEL1	200.00000	970.99199	790.99199	
2	2	BAVUL,ABGRAN,HSHELL1	1527.24556	0.00000	0.00000	
2	2	RPOPS(KRA)	507.79793	30.14334	19.14002	75.71230
2	2	BPOPS(KBA)	472.65717	28.05735	17.81549	70.47284
2	2	BPOPS(KBA)	7.79763	30.14334	19.14002	75.71230
2	2	BPOPS(KBA)	472.65717	28.05735	17.81549	70.47284
2	2	BTOTS,RTOTS,RTOT	832.79359	589.00285	1421.79645	
2	2	PRABA(TV),RATP	0.00000	92.40569	92.40569	
2	2	VDRS,VKRS,VDRBS,VKRBNS	0.00000	0.00000	0.00000	
2	2	TERMS1,TERMS2,TERMN1,TERMN2	0.0158	0.00403	0.00457	30000
2	2	BAKS,RSHELK(ID),BAKNS	3.35489	12.32865	0.02093	
RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE 1						
2	2	BAVUL(KRA)	2249.36272	75.01761	92.52399	481.81233
2	2	ARGRA,ARGRAS,BSHEL,RSHEL1	200.00000	1970.86605	1790.86605	
2	2	BAVUL,ABGRAN,HSHELL1	2786.19266	0.00000	0.00000	
2	2	RPOPS(KRA)	1003.06483	33.75307	0.00000	216.78434
2	2	BPOPS(KBA)	557.48507	18.75926	64.76679	120.48429
2	2	BPOPS(KBA)	1263.6883	33.75307	0.00000	216.78434
2	2	BPOPS(KBA)	557.48507	18.75926	64.76679	120.48429
2	2	RTOTS,RTOTS,RTOT	1453.40623	761.49542	2215.10165	
2	2	PRABA(TV),RATP	0.00000	84.55710	84.55710	
2	2	VDRS,VKRS,VDRBS,VKRBNS	0.01000	0.00000	0.02000	60000
2	2	TERMS1,TERMS2,TERMN1,TERMN2	0.0254	0.00497	0.00844	0.03527
2	2	BAKS,RSHELK(ID),BAKNS	7.22165	26.85591		
TOTAL AIRCRAFT DESTRUCTION FOR DAY 2						
2	2	RTOTS,RTOTS,RTOT	832.79359	589.00285	1421.79645	
2	2	XS,XNS	0.0403	0.02023		
2	2	BAD(KRA,IO),KBA=1.4	27.71456	80.76992	53.62963	6.29929
2	2	RTOTS,RTOTS,RTOT	1453.40623	761.49542	2215.10165	
2	2	XS,XNS	0.0497	0.03527		
2	2	BAD(KRA,IO),KBA=1.4	30.76382	88.63045	115.30819	7.54648

BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 3

3	3	BS(TV,MS)	0.00000	0.00000	3032.06040	144.08431	271.42699
3	3	BA(TV,MS)	0.00000	0.00000	1212.82414	72.04216	180.95133
3	3	BANF(TV,MS)	0.00000	0.00000	0.00000	0.00000	0.00000
3	3	BANAS	0.00000	0.00000	0.00000	0.00000	0.00000
RED SORTIES AND AIRCRAFT AT BEGINNING OF DAY 3							
3	3	RS(TV,MS)	0.00000	0.00000	5509.31187	222.56499	952.97233
3	3	RA(TV,MS)	0.00000	0.00000	2203.72475	74.18833	476.48617

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																				

4	BAVUL(KBA)	1200.11280	20.09324	12.11876	177.84073	
4	ARQA,ARQA45,BSHEL,BSHEL1	200.00000	200.00000	985.56534	785.56534	
4	BAVULI,ABGRAN,BSHEL1	1410.16552	0.00000	785.56534		
4	ROPS(KBA)	534.84062	8.95473	5.40083	79.25825	
4	ROPS(KBA)	425.24962	7.11987	4.29418	63.01833	
4	ROPS(KBA)	734.84062	8.95473	5.40083	79.25825	
4	ROPS(KBA)	425.24962	7.11987	4.29418	63.01833	
4	RTOTS,RTOTNS,RTOT	828.45243	499.67999	1328.13242		
4	PRABA(TY),RATP	0.00000	4.54967	4.54967		
4	VRDPS,VRKRS,VRDRNS,VRKRS	0.00000	20000	20000	30000	
4	TERMS1,TERMS2,TERMNI,TERMNI2	0.00159	0.00022	0.00476	0.00108	
4	BAKS,BSHELK(ID),RAKNS	180.41	21.453	5.4196		
RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE						
4	RAVUL(KRA)	2188.43390	8.98790	10.43573	472.54296	
4	ARQA,ARQA45,BSHEL,BSHEL1	200.00000	200.00000	1983.59255	1783.59255	
4	BAVULI,ABGRAN,BSHEL1	2669.96476	0.00000	1783.59255		
4	ROPS(KRA)	1315.72784	5.40369	0.00000	284.10176	
4	ROPS(KRA)	653.86267	2.68541	9.39215	141.18690	
4	ROPS(KRA)	1515.72784	5.40369	0.00000	284.10176	
4	ROPS(KRA)	653.86267	2.68541	9.39215	141.18690	
4	RTOTS,RTOTNS,RTOT	1805.23329	807.12714	2612.36044		
4	PRABA(TY),RATP	0.00000	24.14134	24.14134		
4	VRDPS,VRKRS,VRDRNS,VRKRS	0.00000	40000	0.00000	60000	
4	TERMS1,TERMS2,TERMNI,TERMNI2	0.00254	0.00136	0.00829	0.01000	
4	BAKS,BSHELK(ID),RAKNS	2445332	1.34786	8.06829		
TOTAL AIRCRAFT DESTRUCTION FOR DAY 4						
4	RTOTS,RTOTNS,RTOT	828.45243	499.67999	1328.13242		
4	XS,XNS	0.00022	0.00108			
4	BAD(KBA,IDI),KBA=1,4	2.06135	12.02038	7.80146	51293	
4	RTOTS,RTOTNS,RTOT	1805.23329	807.12714	2612.36044		
4	XS,XNS	0.00136	0.01000			
4	RAD(KRA,IDI),KRA=1,4	10.30341	19.18474	22.96704	2.38757	
BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 5						
5	BS(TY,MS)	0.00000	0.00000	1274.49154	14.05850	106.65307
5	BA(TY,MS)	0.00000	0.00000	1274.49154	20.08357	177.75312
5	BANAS	0.00000	0.00000			
5	BAN(TY,MS)	0.00000	0.00000	0.00000	6.02507	71.10205
5	KS(TY,MS)	0.00000	0.00000	3269.75672	15.22131	376.59641
5	RA(TY,MS)	0.00000	0.00000	2179.43781	8.95371	470.74552
5	BANAS	0.00000	0.00000			
5	BAN(TY,MS)	0.00000	0.00000	0.00000	0.00000	94.14910
ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION						
5	IRIRA,IBARI	0	0			
5	HATS,RATSI	25.56315	25.56315			
5	BITS,BITSI	1381.14461	0.00000			
5	VPIORA(TY)	0.00050	0.00100			
5	VRABI(KAT)	0.00000	0.00000			
5	HSENG(TY,MS)	0.00000	0.00000			
5	UENOM	2.01147	0.00000			
5	HPENG(TY)	0.45663	0.00000			
5	RSKAA(TY,MS)	0.00000	0.00000	9.1082	4.97282	15244
5	BAKAA(TY,MS)	0.00000	0.00000	0.01082	4.97282	15244
5	HSH(TY,MS)	0.00000	0.00000	0.00000	1.43551	0.00000
5	HAFB(TY,MS)	0.00000	0.00000	0.00000	2.47370	0.00000
5	RS(TY,MS)	0.00000	0.00000	1273.58072	7.65017	106.50063
5	BA(TY,MS)	0.00000	0.00000	1273.58072	7.65017	106.50063
ATTRITION TO RED IN AIR-TO-AIR INTERACTION						
5	IRIRA,IBARI	0	0			
5	HATS,RATSI	25.56315	25.56315			
5	BITS,BITSI	1381.14461	0.00000			
5	VPIORA(TY)	0.00050	0.00100			
5	VRABI(KAT)	0.00000	0.00000			
5	HSENG(TY,MS)	0.00000	0.00000			
5	UENOM	2.01147	0.00000			
5	HPENG(TY)	0.45663	0.00000			
5	RSKAA(TY,MS)	0.00000	0.00000	9.1082	4.97282	15244
5	BAKAA(TY,MS)	0.00000	0.00000	0.01082	4.97282	15244
5	HSH(TY,MS)	0.00000	0.00000	0.00000	1.43551	0.00000
5	HAFB(TY,MS)	0.00000	0.00000	0.00000	2.47370	0.00000
5	RS(TY,MS)	0.00000	0.00000	1273.58072	7.65017	106.50063
5	BA(TY,MS)	0.00000	0.00000	1273.58072	7.65017	106.50063

[illegible]

WE AIRBASE--B, WE LOSSES CAUSED BY RED ATTACK MORE

AVUL(KRA)	1273.58072
AGRA,VKGRAS,B\$HEL,B\$HEL1	200.00000
HAVULT,ABGRAN,B\$HEL1	1473.20448
BPOPS(KRA)	611.04009
BPOPS(KBA)	535.18256
BPOPS(KRA)	811.04009
BPOPS(KBA)	535.18256
BTOYS,BTOINS,BTOT	908.81582
PRADA(TY),RAPV	0.00000
VDRDS,VKGRS,VKOBNS,VKKNBS	0.10000
TERMS1,TERMS2,TERMIN,TERMIN2	0.0159
HAKS,B\$HELK(I0),HAKNS	.13798

RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE 1

R	RAVUL(KRA)	2179.47924
E	AQVA,RPOPS,RSHEL,RSHELL	200.00000
E	RAVUL,YARGRAN,RSHELL	2655.44109
E	RPOPS(KRA)	1316.51528
E	RPOPS(KRA)	645.01603
E	RPOPS(KRA)	1516.51528
E	RPOPS(KRA)	645.01403
E	RTOTS,ATUTNS,RTOT	1804.02022
E	PHABA(TV),RATP	0.00000
E	VADRIS,VAKRAS,VADRINS,VBKANS	.01000
E	TERMS1,ATERMS2,TERM1,TERM2	.00255
E	RAKS,RSLSHC(10),BAKNS	.47773

TOTAL AIRCRAFT DESTRUCTION FOR DAY 5

5	RTOTS, RTOTAS, RTOT
5	XS, XNS
5	RAO(KRA, ID), KRA=1..4
5	RTOTS, RTOT, S, RTOT
5	XS, XNS
5	RAO(KRA, ID), KRA=1..4

	BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY	\$S/TY.MS)	0-00000
6			

7.28983 106.51758

6	RPDPS(KRA)	1517.39526	0.00000	5.10023	130.00349
6	RPDPS(KRA)	642.37441	0.00000	3.10823	284.45812
6	RTOTS,RTOTNS,RTOT	183.77412	785.12856	2588.90269	136.78534
6	PRABAT(Y),BATP	0.00000	2.49724	2.89724	0.00000
6	VDRNS,VBRNS,VBORNS,VKRRNS	0.00000	0.00000	0.00000	0.00000
6	TERMS1,TERMS2,TERMN1,TERMN2	0.00255	0.00017	0.00837	0.00122
6	RAKS,RSHEL(KID),RAKNS	0.30109	0.16542	0.95526	0.00122

TOTAL AIRCRAFT DESTRUCTION FOR DAY 6					
6	RTOTS,RTOTNS,RTOT	905.68089	611.91316	1518.59405	
6	XS,XNS	0.0009	0.00047		
6	BAD(KRA,ID),KRA=1.4	0.0009			
6	RTOTS,RTOTNS,RTOT	1803.77412	785.12856	2588.90269	0.13201
6	XS,XNS	0.0017	0.00122		
6	RAD(KRA,ID),KRA=1.4	1.26806	2.16282	2.52826	0.29681

BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 7					
7	BS(TY,MS)	0.00000	0.00000	1272.16718	7.55241
7	BA(TY,MS)	0.00000	0.00000	1272.16718	10.78915
7	BANAS	0.00000	0.00000	0.00000	0.00000
7	BANFTY(MS)	0.00000	0.00000	0.00000	0.00000
7	RS(TY,MS)	0.00000	0.00000	3264.73716	5.39467
7	RA(TY,MS)	0.00000	0.00000	2176.49144	3.17333
7	RANAS	0.00000	0.00000	0.00000	0.00000
7	RANFTY(MS)	0.00000	0.00000	0.00000	0.00000
7	IRIRA,IBARI	0.00000	0.00000	0.00000	0.00000
7	RATS,RATSI	8.84448	0.00000	0.00000	0.00000
7	RITS,RITSI	1378.60555	0.00000	0.00000	0.00000
7	VRUBA(TY)	0.0050	0.00000	0.00000	0.00000
7	VRUBI(KAT)	0.00000	0.00000	0.00000	0.00000
7	RSNG(TY,MS)	2.00834	0.00000	0.00000	0.00000
7	DENOM	0.00000	0.00000	0.00000	0.00000
7	RSNG(TY)	0.00000	0.00000	0.00000	0.00000
7	RSKAA(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BAKAA(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	HSF(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BAF(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BS(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BA(TY,MS)	0.00000	0.00000	0.00000	0.00000

ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION					
7	RATS,RATSI	8.84448	0.00000	0.00000	0.00000
7	RITS,RITSI	1378.60555	0.00000	0.00000	0.00000
7	VRUBA(TY)	0.0050	0.00000	0.00000	0.00000
7	VRUBI(KAT)	0.00000	0.00000	0.00000	0.00000
7	RSNG(TY,MS)	2.00834	0.00000	0.00000	0.00000
7	DENOM	0.00000	0.00000	0.00000	0.00000
7	RSNG(TY)	0.00000	0.00000	0.00000	0.00000
7	RSKAA(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BAKAA(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	HSF(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BAF(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BS(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BA(TY,MS)	0.00000	0.00000	0.00000	0.00000

ATTRITION TO RED IN AIR-TO-AIR INTERACTION					
7	RATS,RATSI	11.93717	0.00000	0.00000	0.00000
7	RITS,RITSI	3640.70946	0.00000	0.00000	0.00000
7	VRUBA(TY)	0.0100	0.00000	0.00000	0.00000
7	VRUBI(KAT)	0.00000	0.00000	0.00000	0.00000
7	RSNG(TY,MS)	2.00834	0.00000	0.00000	0.00000
7	DENOM	0.00000	0.00000	0.00000	0.00000
7	RSNG(TY)	0.00000	0.00000	0.00000	0.00000
7	RSKAA(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BAKAA(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	HSF(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BAF(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BS(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BA(TY,MS)	0.00000	0.00000	0.00000	0.00000

BLUE LOSSES TO ENEMY SAMs					
7	BSL(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	HAL(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BS(TY,MS)	0.00000	0.00000	0.00000	0.00000
7	BA(TY,MS)	0.00000	0.00000	0.00000	0.00000

BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY									
9	BS(TY,MS)	0.00000	0.00000	1271.48244	4.05425	1.58476	106.37357		
9	BA(TY,MS)	0.00000	0.00000	1271.48244	5.79178	1.58476	177.28928		
9	BANAS	0.00000	0.00000						
9	RANF(TY,MS)	0.00000	0.00000	0.00000	1.73753	0.00000	70.91571		
9	RS(TY,MS)	0.00000	0.00000	3262.86101	1.90148	1.14590	375.73546		
9	RA(TY,MS)	0.00000	0.00000	2175.24067	1.11852	1.14590	469.66933		
9	RANAS	0.00000	0.00000						
9	RANF(TY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	93.93367		
ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION									
9	IRIUA,IRARI	0	0						
9	RATS,RATSI	3.04739	3.04739						
9	HITS,BITSI	1377.85401	0.00000						
9	VADUBA(TYI)	.00050	.00100						
9	VADUBI(KAT)	0.00000	0.00000	0.00000	0.00000	1.37136			
9	HSENG(TY,MS)	0.00000	0.00000						
9	DENGM	2.00000	0.00000						
9	BPENG(TY)	.45466	.14334						
9	BSKAA(TY,MS)	0.00000	0.00000	.10850	1.43898	.56248	.01816		
9	BAKAA(TY,MS)	0.00000	0.00000	.10850	1.43898	.56248	.01816		
9	BSFB(TY,MS)	0.00000	0.00000	0.00000	.41346	.32355	0.00000		
9	BAFB(TY,MS)	0.00000	0.00000	0.00000	.41346	.32355	0.00000		
9	BS(TY,MS)	0.00000	0.00000	1271.37394	2.20140	.69873	106.35541		
9	BA(TY,MS)	0.00000	0.00000	1271.37394	2.20140	.69873	106.35541		
ATTRITION TO RED IN AIR-TO-AIR INTERACTION									
9	RATS,RATSI	5.63901	5.63901						
9	VADUBA(TYI)	3638.59447	0.00000						
9	VADUBI(KAT)	.00100	.00200						
9	RSENG(TY,MS)	0.00000	0.00000	0.00000	0.00000	.88592			
9	DENGM	2.00217	0.00000						
9	BPENG(TY)	.41280	.18120						
9	BSKAA(TY,MS)	0.00000	0.00000	.10162	73346	.44201	.02340		
9	BAKAA(TY,MS)	0.00000	0.00000	.06774	.43145	.44201	.02340		
9	BSFB(TY,MS)	0.00000	0.00000	0.00000	.36831	.26635	0.00000		
9	BAFB(TY,MS)	0.00000	0.00000	0.00000	.21665	.26635	0.00000		
9	RS(TY,MS)	0.00000	0.00000	3262.75939	.79972	.43755	375.71206		
9	BA(TY,MS)	0.00000	0.00000	2175.17293	.47042	.43755	375.71206		
BLUE LOSSES TO ENEMY SAMS									
9	BSL(TY,MS)	0.00000	0.00000	0.00000	.11007	.06987	0.00000		
9	BSL(TY,MS)	0.00000	0.00000	0.00000	.11007	.06987	0.00000		
9	BS(TY,MS)	0.00000	0.00000	1271.37394	2.09133	.62886	106.35541		
9	BA(TY,MS)	0.00000	0.00000	1271.37394	2.09133	.62886	106.35541		
RED LOSSES TO ENEMY SAMS									
9	BSL(TY,MS)	0.00000	0.00000	0.00000	.03999	.04375	0.00000		
9	BSL(TY,MS)	0.00000	0.00000	0.00000	.03999	.04375	0.00000		
9	BS(TY,MS)	0.00000	0.00000	3262.75939	.75973	.39379	375.71206		
9	BA(TY,MS)	0.00000	0.00000	2175.17293	.44690	.39379	375.71206		
BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE 1									
9	BAVUL(KBA)	1271.37394	4.24273	.95241	177.27113				
9	ABQHA,ABQHAS,BSHEL,BSHSL	200.00000	200.00000	985.06378	785.06378				
9	BAVULTABORAN,BSHSL	1453.84820	0.00000	785.06378					
9	BPDS(KBA)	617.87992	2.06194	.46286	86.15268				
9	BPDS(KBA)	526.35662	1.75052	.39379	73.39134				
9	BPDS(KBA)	817.87992	2.06194	.46286	86.15268				
9	BPDS(KBAT)	526.35662	1.75052	.39379	73.39134				
9	BPDS(KBAT)	906.55741	601.89877	1508.45618					
9	IRAX	0.00000	.39379	.39379					
RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE 1									
9	BAVUL(KBA)	1271.37394	4.24273	.95241	177.27113				
9	ABQHA,ABQHAS,BSHEL,BSHSL	200.00000	200.00000	985.06378	785.06378				
9	BAVULTABORAN,BSHSL	1453.84820	0.00000	785.06378					
9	BPDS(KBA)	617.87992	2.06194	.46286	86.15268				
9	BPDS(KBA)	526.35662	1.75052	.39379	73.39134				
9	BPDS(KBA)	817.87992	2.06194	.46286	86.15268				
9	BPDS(KBAT)	526.35662	1.75052	.39379	73.39134				
9	BPDS(KBAT)	906.55741	601.89877	1508.45618					
9	IRAX	0.00000	.39379	.39379					

11	BAKAA(TY,MS)	34.86341	52.27311	0.00000	.11731	.03137	5.22286
11	BAKAA(TY,MS)	34.86341	34.86341	0.00000	.11731	.03137	5.22286
11	BAKAA(TY,MS)	14.82193	44.46580	0.00000	.05072	.02669	0.00000
11	BAKAA(TY,MS)	14.82193	29.64386	0.00000	.05072	.02669	0.00000
11	BAKAA(TY,MS)	585.96983	855.74184	0.00000	2.00527	.51418	181.13344
11	BAKAA(TY,MS)	585.96983	571.14789	0.00000	2.00527	.51418	181.13344
ATTENTION TO RED IN AIR-TO-AIR INTERACTION							
11	BATS,BATSI	1591.88547	1591.88547				
11	BATS,BATSI	375.70410	0.00000				
11	VOIDRA(TY)	.00100	0.00000				
11	VOIDRA(TY)	0.00000	0.00000		0.00000	.01074	
11	VOIDRA(TY)	104.42535	0.00000				
11	VOIDRA(TY)	.37570	0.00000				
11	VOIDRA(TY)	0.00000	1.00000				
11	VOIDRA(TY)	52.59308	0.00000		.00951	.00541	8.72923
11	VOIDRA(TY)	30.93123	0.00000		.00560	.00541	8.72923
11	VOIDRA(TY)	25.92113	0.00000		.00469	.00320	0.00000
11	VOIDRA(TY)	15.24772	0.00000		.00276	.00320	0.00000
11	VOIDRA(TY)	3619.21204	0.00000		.65478	.37157	366.97487
11	VOIDRA(TY)	2128.94826	0.00000		.38516	.37157	366.97487
BLUE LOSSES TO ENEMY SAMS							
11	BSL(TY,MS)	29.29849	85.67218	0.00000	.10026	.05142	0.00000
11	BSL(TY,MS)	29.29849	57.11479	0.00000	.10026	.05142	0.00000
11	BSL(TY,MS)	556.67133	771.04966	0.00000	1.90501	.46276	181.13344
11	BSL(TY,MS)	556.67133	514.03310	0.00000	1.90501	.46276	181.13344
RED LOSSES TO ENEMY SAMS							
11	BSL(TY,MS)	180.96060	0.00000	0.00000	.03274	.03716	0.00000
11	BSL(TY,MS)	106.44741	0.00000	0.00000	.01926	.03716	0.00000
11	BSL(TY,MS)	3438.25144	0.00000	0.00000	.62204	.33442	366.97487
11	BSL(TY,MS)	2022.50084	0.00000	0.00000	.36591	.33442	366.97487
BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE 1							
11	BAVUL(KBA)	1115.17024	2.88801	.48945	172.03763		
11	BAVUL(KBA)	200.00000	200.00000	985.06378	785.06378		
11	BAVUL(KBA)	1290.58532	0.00000	785.06378			
11	BAVUL(KBA)	610.52282	1.58110	.26794	94.18553		
11	BAVUL(KBA)	393.13039	1.01811	.17254	60.64834		
11	BAVUL(KBA)	310.52282	1.58110	.26794	94.18553		
11	BAVUL(KBA)	393.13039	1.01811	.17254	60.64834		
11	BAVUL(KBA)	906.55741	454.96738	1361.52679			
11	BAVUL(KBA)	0.00000	.33442	.33442			
11	BAVUL(KBA)	40	0.00000	0.00000			
11	BAVUL(KBA)	0.00000	0.00000	0.00000			
11	BAVUL(KBA)	2037.74857	.36866	.33761	460.90090		
11	BAVUL(KBA)	200.00000	200.00000	1981.64594	1781.64594		
11	BAVUL(KBA)	2499.01813	0.00000	1781.64594			
11	BAVUL(KBA)	1307.51025	.23055	0.00000	295.73455		
11	BAVUL(KBA)	526.46346	.09525	.30385	119.07626		
11	BAVUL(KBA)	1507.51025	.23055	0.00000	295.73455		
11	BAVUL(KBA)	526.46346	.09525	.30385	119.07626		
11	BAVUL(KBA)	1803.4135	645.93082	2449.42017			
11	BAVUL(KBA)	771.04966	.46276	771.04966			
11	BAVUL(KBA)	.01000	.40000	.02000	.60000		
11	BAVUL(KBA)	0.00000	.04988	.00890	.29177		
11	BAVUL(KBA)	89.96604	49.42686	188.46692			
TOTAL AIRCRAFT DESTRUCTION FOR DAY 11							
11	RTOTS,BTOTNS,BTOT	906.55741	454.96738	1361.52679			
11	RTOTS,BTOTNS,BTOT	0.00000	0.00000	.08280	5.22286		
11	RTOTS,BTOTNS,BTOT	156.14010	21957	2449.42017			
11	RTOTS,BTOTNS,BTOT	1803.48135	645.93082	29177			
11	RTOTS,BTOTNS,BTOT	.04988	.29177				
11	RTOTS,BTOTNS,BTOT	366.18761	.06444	.13122	58.22497		

BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 12									
12	RS(TY,MS)	557.58512	836.37768	0.00000	2.02160	.48945	103.22258		
12	BA(TY,MS)	557.58512	557.58512	0.00000	2.88801	.48945	172.03763		
12	BANAS	0.00000	0.00000	0.00000	.86640	0.00000	68.81505		
12	BANF(TY,MS)	0.00000	0.00000	0.00000	.55943	.24896	329.12412		
12	RS(TY,MS)	3075.19731	0.00000	0.00000	.32907	.24896	411.40515		
12	RA(TY,MS)	1808.93660	0.00000	0.00000	0.00000	0.00000	82.28103		
12	RANAS	0.00000	0.00000	0.00000					
12	RANFTY,MS)	0.00000	0.00000	0.00000					
ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION									
12	IRINA,IRARI	0	0	0.00000					
12	RATS,BATSI	3076.00570	3076.00570	0.00000	.32870	.07958			
12	RITS,BITSI	103.22258	0.00000	0.00000					
12	VTOBA(TYI)	.00050	.00100	0.00000					
12	VRAUBI(KAT)	0.00000	0.00000	0.00000					
12	BSENG(TY,MS)	90.46034	135.99051	0.00000					
12	DENOM	32912							
12	SPENG(TY)	0.00000	1.00000	0.00000					
12	SKAA(TY,MS)	28.90101	43.35151	0.00000	.10478	.02537	5.02708		
12	BAKAA(TY,MS)	28.90101	28.90101	0.00000	.10478	.02537	5.02708		
12	RSFT(TY,MS)	12.35187	37.05560	0.00000	.04478	.02168	0.00000		
12	BAFH(TY,MS)	12.35187	24.70373	0.00000	.04478	.02168	0.00000		
12	RS(TY,MS)	516.33225	755.97057	0.00000	1.87204	.44239	98.19549		
12	RA(TY,MS)	516.33225	503.98038	0.00000	1.87204	.44239	98.19549		
ATTRITION TO RED IN AIR-TO-AIR INTERACTION									
12	RATS,BATSI	1396.47385	1396.47385	0.00000					
12	RITS,BITSI	329.12412	0.00000	0.00000					
12	VTOBA(TYI)	.00100	.00150	0.00000					
12	VRAUBI(KAT)	0.00000	0.00000	0.00000					
12	BSENG(TY,MS)	100.51362	0.00000	0.00000	.01828	.00814			
12	DENOM	32912							
12	SPENG(TY)	0.00000	1.00000	0.00000					
12	SKAA(TY,MS)	50.47028	0.00000	0.00000	.00922	.00410	7.26258		
12	BAKAA(TY,MS)	29.60505	0.00000	0.00000	.00542	.00410	7.26258		
12	RSFT(TY,MS)	24.92167	0.00000	0.00000	.00453	.00242	0.00000		
12	BAFH(TY,MS)	14.65981	0.00000	0.00000	.00267	.00242	0.00000		
12	RS(TY,MS)	2999.60536	0.00000	0.00000	.54567	.24243	321.86154		
12	RA(TY,MS)	1764.47374	0.00000	0.00000	.32099	.24243	321.86154		
BLUE LOSSES TO ENEMY SAMS									
12	BSL(TY,MS)	25.81661	75.59766	0.00000	.09360	.04424	0.00000		
12	BA(TY,MS)	25.81661	50.39804	0.00000	.09360	.04424	0.00000		
12	RS(TY,MS)	490.51363	680.37231	0.00000	1.77843	.38815	98.19549		
12	BA(TY,MS)	490.51363	453.58234	0.00000	1.77843	.38815	98.19549		
RED LOSSES TO ENEMY SAMS									
12	RSL(TY,MS)	149.88027	0.00000	0.00000	.02728	.02424	0.00000		
12	RA(TY,MS)	88.22369	0.00000	0.00000	.01605	.02424	0.00000		
12	RS(TY,MS)	2849.42509	0.00000	0.00000	.51839	.21819	321.86154		
12	RA(TY,MS)	1876.25006	0.00000	0.00000	.30494	.21819	321.86154		
BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK WONE									
12	BAVUL(KBA)	981.15358	2.68962	.41984	167.01055				
12	ABGRA,ABGRAS,BSHEL,BSHEL	200.00000	200.00000	985.06378	189.06378				
12	BAVUL,ABGRAN,BSHEL	1151.27358	0.00000	785.06378					
12	BPOPS(KBA)	602.15144	1.65967	.25766	102.49739				
12	BPOPS(KBA)	280.88653	.76999	.12019	47.81210				
12	BPOPS(KBA)	602.15144	1.65967	.25766	102.49739				
12	BPOPS(KBA)	280.88653	.76999	.12019	47.81210				
12	BTOTS,BTOTNS,BTOT	906.53741	329.58882	1236.14622					
12	PRABA(TY,IRATP)	40	.21819	.21819					
12	IRATP	40							
12	BAKS,BSHELK(ID),BAKNS	0.00000	0.00000	0.00000					
RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK WONE									

12	RAVUL(KRA)	1690.90986	30760	.22061	404.14257	
12	ARORA,ARORAS,RSHEL,RSHEL1	200.00000	1932.21908	1732.21908		
12	RAVUL,ARORAN,RSHEL1	205.36003	0.00000	0.00000	300.69158	
12	ROPS(KRA)	1253.07673	.22886	0.00000	63.03673	
12	ROPS(KRA)	263.74215	.04798	.19855	300.69158	
12	ROPS(KRA)	1456.07673	.22886	0.00000	63.03673	
12	ROPS(KRA)	263.74215	.04798	.19855	300.69158	
12	ROPS(KRA)	1758.99717	327.02541	2086.02258		
12	ROPS(KRA)	680.37351	.39815	680.77166		
12	ROPS(KRA)	.01000	.40000	.02000	.60000	
12	ROPS(KRA)	.00257	.06104	.01032	.29757	
12	TERMS1,TERMS2,TERMIN1,TERMIN2	107.37254	58.97317	97.31136		
12	RAKS,RSHEL(KID),RAKNS					
TOTAL AIRCRAFT DESTRUCTION FOR DAY 12						
12	RTOTS,RTOTNS,RTOT	906.55741	329.58882	1236.14622		
12	XS,XNS	0.00000	0.00000			
12	XS(XBA,10),KBA=1.4	13.01666	.19839	.06961	5.02708	
12	RTOTS,RTOTNS,RTOT	1758.99717	327.02541	2086.02258		
12	XS,XNS	.06104	.26757			
12	RAD(KRA,ID),KRA=1.4	285.51402	.04972	.08743	44.37491	
BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 13						
13	BS(TY,MS)	490.57679	735.86518	0.00000	1.88273	.41984
13	BA(TY,MS)	490.57679	490.57679	0.00000	2.68962	.41984
13	BANAS	0.00000	0.00000	0.00000	.80689	0.00000
13	BANF(TY,MS)	0.00000	0.00000	0.00000		
13	BS(TY,MS)	2586.82349	0.00000	0.00000	.47490	.16153
13	RA(TY,MS)	1523.42558	0.00000	0.00000	.27936	.16153
13	RANAS	0.00000	0.00000	0.00000	0.00000	0.00000
13	RANF(TY,MS)	0.00000	0.00000	0.00000		
RED SORTIES AND AIRCRAFT AT BEGINNING OF DAY 13						
13	BS(TY,MS)	2590.45992	2590.45992	0.00000	0.00000	.06532
13	BA(TY,MS)	100.20633	0.00000	0.00000	.22294	
13	VRDUBA(TY)	.00050	.00100	0.00000	.09312	.03077
13	VRDUBA(TY)	76.32888	114.49484	0.00000	.09312	.03077
13	VRDUBA(TY)	.29362	1.00000	0.00000	.03996	.01782
13	VRDUBA(TY)	24.26422	36.39534	0.00000	.03996	.01782
13	VRDUBA(TY)	24.26422	31.23940	0.00000	.03996	.01782
13	VRDUBA(TY)	10.41313	20.82627	0.00000	1.74965	.38125
13	VRDUBA(TY)	10.41313	668.22944	0.00000	1.74965	.38125
13	VRDUBA(TY)	455.89943	445.48630	0.00000		
13	VRDUBA(TY)	455.89943	1228.74554	0.00000		
13	VRDUBA(TY)	1228.74554	0.00000	0.00000		
13	VRDUBA(TY)	293.62419	.00150	0.00000		
13	VRDUBA(TY)	.00100	0.00000	0.00000		
13	VRDUBA(TY)	96.31324	0.00000	0.00000		
13	VRDUBA(TY)	.29362	1.00000	0.00000		
13	VRDUBA(TY)	48.60831	0.00000	0.00000		
13	VRDUBA(TY)	28.59313	0.00000	0.00000		
13	VRDUBA(TY)	23.85246	0.00000	0.00000		
13	VRDUBA(TY)	14.03056	0.00000	0.00000		
13	VRDUBA(TY)	2517.36271	0.00000	0.00000		
13	VRDUBA(TY)	1480.40160	0.00000	0.00000		
ATTRITION TO RED IN AIR-TO-AIR INTERACTION						
13	BS(TY,MS)	1228.74554	1228.74554	0.00000	.00891	.00303
13	BA(TY,MS)	293.62419	0.00000	0.00000	.00524	.00303
13	VRDUBA(TY)	.00100	0.00000	0.00000	.00437	.00179
13	VRDUBA(TY)	96.31324	0.00000	0.00000	.00437	.00179
13	VRDUBA(TY)	.29362	1.00000	0.00000	.46162	.15671
13	VRDUBA(TY)	48.60831	0.00000	0.00000	.27154	.15671
13	VRDUBA(TY)	28.59313	0.00000	0.00000		
13	VRDUBA(TY)	23.85246	0.00000	0.00000		
13	VRDUBA(TY)	14.03056	0.00000	0.00000		
13	VRDUBA(TY)	2517.36271	0.00000	0.00000		
13	VRDUBA(TY)	1480.40160	0.00000	0.00000		

BLUE LOSSES TO ENEMY SAMS

13	RSL(TY,MS)	22.79497	66.82294	0.00000	.08748	.03813	0.00000
13	RAL(TY,MS)	22.79497	44.54863	0.00000	.08748	.03813	0.00000
13	BS(TY,MS)	433.10446	601.40650	0.00000	1.66217	.34313	95.38942
13	RA(TY,MS)	433.10446	400.93767	0.00000	1.66217	.34313	95.38942

RED LOSSES TO ENEMY SAMS

13	RSL(TY,MS)	125.46814	0.00000	0.00000	.02308	.01567	0.00000
13	RAL(TY,MS)	74.04009	0.00000	0.00000	.01358	.01567	0.00000
13	RS(TY,MS)	2391.49458	0.00000	0.00000	.43854	.14104	287.50933
13	RA(TY,MS)	1406.76152	0.00000	0.00000	.25796	.14104	287.50933

BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE 1

13	RAVUL(KBA)	865.28153	2.50402	.36095	162.19364		
13	ARGRA,ARGRAS,BSHEL,RSHEL	200.00000	200.00000	985.06378	785.06378		
13	RAVUL(T,ARGRA,RSHEL)	1030.34513	0.00000	785.06378			
13	PROPS(KBA)	593.36532	1.72055	.24752	111.22401		
13	PROPS(KBA)	185.48805	.53756	.07731	34.75027		
13	PROPS(KBA)	793.36532	1.72455	.24752	111.22401		
13	PROPS(KBA)	185.48805	.53756	.07731	34.75027		
13	BTOT,RTOT,AS,RTOT	906.55741	220.75321	1127.31062			
13	PRADA(TV),RATP	0.00000	.14104	.14104			
13	IR,EX	40	0.00000	0.00000			

RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE 1

13	RAVUL(KBA)	1420.19238	.26054	.14283	350.91538		
13	ARGRA,ARGRAS,BSHEL,RSHEL	200.00000	200.00000	1873.24591	1673.24591		
13	RAVUL(T,ARGRA,RSHEL)	1781.66829	0.00000	1673.24591			
13	PROPS(KBA)	1200.69562	.22018	0.00000	305.00552		
13	PROPS(KBA)	74.1751	.01431	.12854	19.81832		
13	PROPS(KBA)	1498.01751	.22018	0.00000	305.00552		
13	PROPS(KBA)	1705.82132	.01431	.12854	19.81832		
13	PRADA(TV),RATP	601.40650	.34313	601.74963	.60000		
13	TERMS1,TERMS2,TERMN1,TERMN2	.01000	.40000	.02000	.29479		
13	RAK,RSHEL(KID),RAKNS	.00260	.06860	.01154			
13	RAK,RSHEL(KID),RAKNS	117.02644	64.25246	28.88324			

TOTAL AIRCRAFT DESTRUCTION FOR DAY 13

13	BTOT,RTOT,AS,RTOT	906.55741	220.75321	1127.31062			
13	XS,XNS	0.00000	0.00000	.05889	4.81691		
13	SAD(KBA,RTOT,KBA=1,VA	115.87205	.18060	1803.90001			
13	RTOT,RTOT,AS,RTOT	1705.92132	97.97869	1803.90001			
13	XS,XNS	.06860	.29479	.05660	32.88055		
13	RAD(KBA,RTOT,KBA=1,VA	221.72000	.03814				

BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 14

14	BS(TY,MS)	432.64076	648.96115	0.00000	1.75631	.36095	97.31618
14	BAT(TY,MS)	432.64076	432.64076	0.00000	2.50902	.36095	162.19364
14	BANAS	0.00000	0.00000	0.00000			
14	BANF(TY,MS)	0.00000	0.00000	0.00000	.75270	0.00000	64.87746

RED SORTIES AND AIRCRAFT AT BEGINNING OF DAY 14

14	RS(TY,MS)	2212.89946	0.00000	0.00000	.41006	.10493	267.31975
14	RAL(TY,MS)	1301.70558	0.00000	0.00000	.24121	.10493	334.14969
14	RANAS	0.00000	0.00000	0.00000			
14	RANF(TY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	66.82994

ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION

14	IBIRA,IBARI	0	0				
14	RAT,RTS	2213.41448	2213.41448				
14	RTS,RTS	97.31618	0.00000				
14	RTS,RTS	.00050	.00100				
14	VRIOBAT(TV)	.2408880	.2408880	0.00000	0.00000	0.00000	0.00000
14	VRIOBAT(TV)						

[illegible]

[illegible]

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25	KLIS,MSI	145.7071	0.00000	0.00000	0.00000	0.00187	1.34151
25	VRIDRA(TI)	.00100	.00150	.00000	.00000	.00000	0.00000
25	VRIDRA(KAT)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	RSFNG(TY,MS)	36.54373	0.00000	0.00000	0.00000	0.00000	0.00000
25	DENOM	.14591	0.00000	0.00000	0.00000	0.00000	0.00000
25	HPENG(TY)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	RSKAA(TY,MS)	18.63881	0.00000	0.00000	0.00000	0.00000	0.00000
25	RAKAA(TY,MS)	10.86401	0.00000	0.00000	0.00000	0.00000	0.00000
25	RSFB(TY,MS)	8.95246	0.00000	0.00000	0.00000	0.00000	0.00000
25	RAF(TY,MS)	5.26615	0.00000	0.00000	0.00000	0.00000	0.00000
25	RS(TY,MS)	439.75490	0.00000	0.00000	0.00000	0.00000	0.00000
25	RA(TY,MS)	258.67935	0.00000	0.00000	0.00000	0.00000	0.00000
25	BLUE LOSSES TO ENEMY SAMS						
25	RSL(TY,MS)	6.39959	18.87732	0.00000	0.00000	0.00000	0.00000
25	HAL(TY,MS)	6.39959	12.58486	0.00000	0.00000	0.00000	0.00000
25	HS(TY,MS)	121.59214	169.89587	0.00000	0.00000	0.00000	0.00000
25	HAL(TY,MS)	121.59214	113.26391	0.00000	0.00000	0.00000	0.00000
25	RED LOSSES TO ENEMY SAMS						
25	RSL(TY,MS)	21.98775	0.00000	0.00000	0.00000	0.00000	0.00000
25	HAL(TY,MS)	12.93397	0.00000	0.00000	0.00000	0.00000	0.00000
25	HS(TY,MS)	417.78716	0.00000	0.00000	0.00000	0.00000	0.00000
25	HAL(TY,MS)	245.74539	0.00000	0.00000	0.00000	0.00000	0.00000
25	BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE 1						
25	BAVUL(KBA)	241.28484	1.18806	17.33541	123.89395	123.89395	0.00000
25	ARQKA,ARQKAS,RSHEL,RSHEL1	200.00000	200.00000	985.06378	785.06378	785.06378	0.00000
25	BAVUL,ARQKAS,RSHEL,RSHEL1	383.68227	0.00000	383.68227	111.50456	111.50456	0.00000
25	BPOPS(KBA)	217.15635	1.05125	15.00000	0.00000	0.00000	0.00000
25	BPOPS(KBA)	.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	BPOPS(KBA)	417.15635	1.05125	15.00000	111.50456	111.50456	0.00000
25	BPOPS(KBA)	.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	BTOTS,BTOTNS,BTOT	545.31404	0.00000	545.31404	0.00000	0.00000	0.00000
25	PRABATY,PRATP	0.00000	.02019	.02019	.02019	.02019	0.00000
25	IRAX	40	0.00000	0.00000	0.00000	0.00000	0.00000
25	BAKS,RSHELK(ID),BAKNS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE 1						
25	BAVUL(KBA)	251.01154	.05586	.02074	181.04370	181.04370	0.00000
25	ARQKA,ARQKAS,RSHEL,RSHEL1	200.00000	200.00000	1392.90238	1192.90238	1192.90238	0.00000
25	BAVUL,ARQKAS,RSHEL,RSHEL1	432.11110	0.00000	432.11110	162.93933	162.93933	0.00000
25	BPOPS(KBA)	225.91038	.05028	0.00000	0.00000	0.00000	0.00000
25	BPOPS(KBA)	.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	BPOPS(KBA)	425.91038	.05028	0.00000	162.93933	162.93933	0.00000
25	BPOPS(KBA)	.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	BTOTS,BTOTNS,BTOT	588.89999	.01867	.01867	0.00000	0.00000	0.00000
25	PRABATY,PRATP	169.89587	16.70337	186.59923	.60000	.60000	0.00000
25	VRORS,VRORS,VRORS,VRORS	.01000	.40000	.02000	0.00000	0.00000	0.00000
25	TERMS1,TERMS2,TERMS1,TERMS2	.00289	.02065	0.00000	0.00000	0.00000	0.00000
25	BAKS,RSHELK(ID),BAKNS	15.69516	18.56158	0.00000	0.00000	0.00000	0.00000
25	TOTAL AIRCRAFT DESTRUCTION FOR DAY 25						
25	BTOTS,BTOTNS,BTOT	545.31404	.08980	545.31404	1.82771	1.82771	0.00000
25	XS,ANS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	BAK,BAK,BAK,BAK,BAK	28.74313	.07255	2.57550	0.00000	0.00000	0.00000
25	BTOTS,BTOTNS,BTOT	588.89999	.01867	588.91866	0.00000	0.00000	0.00000
25	XS,ANS	.02665	0.00000	0.00000	0.00000	0.00000	0.00000
25	BAK,BAK,BAK,BAK,BAK	35.24919	.08980	.08980	5.68412	5.68412	0.00000

25	BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 25						
25	BS(TY,MS)	120.64242	180.96363	0.00000	.81764	17.33541	74.33637
25	HAL(TY,MS)	120.64242	120.64242	0.00000	1.18806	17.33541	123.89395
25	BAKNS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25	BAKNS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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26	PRADA(IY),BATP	254.72642	0.0000	14.55827	124.77087	0.0000	
26	VRMS,VRKRS,VBORNS,VKRRNS	151.05226	0.0000	106.50851	0.0000	0.60000	
26	TERMS1,TERMS2,TERMIN1,TERMIN2	0.0000	0.0000	0.0000	0.0000	0.00000	
26	RAKS,RSHELK(ID),RAKNS	13.26647	0.0000	16.43308	0.0000	0.00000	
TOTAL AIRCRAFT DESTRUCTION FOR DAY 26							
26	RTOTS,RTUTNS,RTOT	518.74610	0.0000	518.74610			
26	XS,ANS	0.00000	0.00000				
26	BAD(KRA, ID),KRA=1.4	25.58357	0.06794	2.23563	1.63279		
26	RTOTS,RTOTUS,RTOT	554.75472	0.01616	554.77087			
26	XS,ANS	0.00000	0.00000				
26	KAD(KRA, ID),KRA=1.4	30.54533	0.00546	0.00279	4.95931		
BLUE SORTIES AND AIRCRAFT AT BEGINNING OF DAY 27							
27	HS(IY,MS)	107.85063	0.00000	141.77595	0.00000	0.77008	73.35670
27	HA(IY,MS)	107.85063	0.00000	107.85063	0.00000	1.10012	122.26116
27	RANAS	0.00000	0.00000	0.00000	0.00000	0.33003	48.90446
27	RANF(IY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
27	HS(IY,MS)	355.49549	0.00000	0.00000	0.00000	0.08272	137.39342
27	HA(IY,MS)	209.11499	0.00000	0.00000	0.00000	0.08466	171.74178
27	RANAS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
27	RANF(IY,MS)	0.00000	0.00000	0.00000	0.00000	0.00000	34.34836
ATTRITION TO BLUE IN AIR-TO-AIR INTERACTION							
27	IBIRA,IBARI	0	0	0			
27	RATS,RATSI	355.59617	0.00000	355.59617			
27	RITS,BITSI	73.35670	0.00000	0.00000			
27	VRIDRA(IY)	0.00050	0.00100	0.00100			
27	VRABDI(KAT)	0.00000	0.00000	0.00000			
27	RSENG(IY,MS)	12.15392	0.00000	18.23793	0.00000	0.08080	1.70245
27	DENOM	0.13739	0.00000	0.00000		0.08080	
27	BPENG(IY)	3.40072	1.00000	1.00000		0.02714	0.53213
27	SKAA(IY,MS)	3.40072	5.70109	0.00000	0.00000	0.02714	1.45511
27	BAKAA(IY,MS)	3.40072	3.80072	0.00000	0.00000	0.01194	0.46813
27	BSFB(IY,MS)	1.67182	5.01546	0.00000	0.00000	0.01194	0.46813
27	BAFB(IY,MS)	1.67182	3.34364	0.00000	0.00000	0.01194	0.46813
27	HS(IY,MS)	102.37804	151.05441	0.00000	0.00000	0.73101	14.09953
27	HA(IY,MS)	102.37804	100.70827	0.00000	0.00000	0.73101	14.09953
ATTRITION TO RED IN AIR-TO-AIR INTERACTION							
27	BATS,BATSI	285.49645	285.49645				
27	RITS,RITSI	137.39342	0.00000	0.00000			
27	VRIDRA(IY)	0.00100	0.00150	0.00150			
27	VRABDI(KAT)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00147
27	RSENG(IY,MS)	29.09363	0.00000	0.00000		0.00000	
27	DENOM	0.13739	0.00000	0.00000		0.00000	
27	BPENG(IY)	3.40072	1.00000	1.00000		0.00346	0.00075
27	SKAA(IY,MS)	3.40072	14.85305	0.00000	0.00000	0.00203	1.04262
27	BAKAA(IY,MS)	3.40072	8.73709	0.00000	0.00000	0.00166	0.46813
27	BSFB(IY,MS)	1.67182	7.12029	0.00000	0.00000	0.00097	0.00043
27	BAFB(IY,MS)	1.67182	4.18411	0.00000	0.00000	0.00097	0.00043
27	HS(IY,MS)	333.52215	0.00000	0.00000	0.00000	0.07761	136.35080
27	HA(IY,MS)	196.18950	0.00000	0.00000	0.00000	0.04565	136.35080
BLUE LOSSES TO ENEMY SAMS							
27	BSL(IY,MS)	5.11890	15.10594	0.00000	0.00000	0.03655	0.00000
27	BAL(IY,MS)	5.11890	10.07063	0.00000	0.00000	0.02655	0.00000
27	BS(IY,MS)	97.25919	135.95347	0.00000	0.00000	0.6446	71.90159
27	BAL(IY,MS)	97.25919	90.63564	0.00000	0.00000	0.6446	71.90159
RED LOSSES TO ENEMY SAMS							
27	BSL(IY,MS)	16.67411	0.00000	0.00000	0.00000	0.03688	0.00000
27	BAL(IY,MS)	16.67411	0.00000	0.00000	0.00000	0.02228	0.00000

30	RSL(TY,MS)	10.74775	0.00000	0.00000	.00274	.00108	0.00000
30	RAL(TY,MS)	6.72221	0.00000	0.00000	.00161	.00108	0.00000
30	RS(TY,MS)	204.20727	0.00000	0.00000	.05199	.00970	125.31913
30	RA(TY,MS)	120.12192	0.00000	0.00000	.03059	.00970	125.31913
BLUE AIRBASE--BLUE LOSSES CAUSED BY RED ATTACK MODE 1							
30	BAVUL(KRA)	192.04096	.87079	8.76231	117.38525		
30	ARQRA,ARQRA5,RSHEL,RSHEL1	200.00000	200.00000	945.06374	745.06378		
30	BAVULT,ARQRA,RSHEL1	319.95932	0.00000	319.95932			
30	RPOPS(KRA)	173.64687	.78371	7.88610	105.64672		
30	RPOPS(KRA)	373.00889	.98319	7.88610	105.64672		
30	RPOPS(KRA)	487.96339	.00000	487.96339	.00000		
30	PRABA(TY),BATP	0.00000	.00970	.00970			
30	IR4EX	40	0.00000	0.00000			
30	BAKS,RSHEL(ID),BAKNS	0.00000	0.00000	0.00000			
RED AIRBASE--RED LOSSES CAUSED BY BLUE ATTACK MODE 1							
30	BAVUL(KRA)	122.97446	.03131	.01000	156.88430		
30	ARQRA,ARQRA5,RSHEL,RSHEL1	200.00000	200.00000	1310.25617	1110.25617		
30	BAVULT,ARQRA,RSHEL1	279.89008	0.00000	279.89008			
30	RPOPS(KRA)	110.67702	.02818	0.00000	141.19587		
30	RPOPS(KRA)	310.67702	.02918	0.00000	141.19587		
30	RPOPS(KRA)	451.96107	.00900	451.91087	.00000		
30	PRABA(TY),BATP	136.33406	8.47403	144.31204			
30	VDRS,VBKRS,VBDRNS,VBKNS	.01000	.40000	.02000	.60000		
30	TERMS1,TERMS2,TERMN1,TERMN2	.00294	.02113	0.00000	0.00000		
30	BAKS,RSHEL(ID),BAKNS	9.54789	13.84173	0.00000			
TOTAL AIRCRAFT DESTRUCTION FOR DAY 30							
30	RTOTS,BTOTMS,BTOT	487.96339	.00000	487.96339			
30	XS,XNS	0.00000	0.00000				
30	BAD(KBA>ID),KBA=1.4	22.22341	.05178	1.26775	.99223		
30	RTOTS,BTOTMS,BTOT	451.90107	.00900	451.91007			
30	XS,XNS	.02113	0.00000				
30	BAD(KBA>ID),KBA=1.4	18.85083	.00372	.00159	3.92441		

C. RESULTS OVER COURSE OF WAR

STRATEGIES BY PERIOD	BLUE		INT	RED		INT
	CAS	ABA		CAS	ABA	
1	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
2	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000
3	.5000	.5000	0.0000	1.0000	0.0000	0.0000

MUD(1)	1.118	1.102	1.087	1.072	1.057	1.042	1.028	1.013	.999	.985
	.971	.958	.944	.931	.918	.905	.893	.880	.868	1.135
	1.119	1.104	1.088	1.073	1.058	1.043	1.029	1.014	1.000	.986
MUD(2)	.559	.551	.544	.536	.528	.521	.514	.507	.500	.493
	.486	.479	.472	.466	.459	.453	.446	.440	.434	.428
	.560	.552	.544	.537	.529	.522	.514	.507	.500	.493
MUD(3)	.140	.138	.136	.134	.132	.130	.128	.127	.125	.123
	.121	.120	.118	.116	.115	.113	.112	.110	.108	.106
	.133	.131	.129	.128	.126	.124	.122	.121	.119	.117
MUF	40.000	39.441	38.890	38.346	37.810	37.287	36.761	36.247	35.740	35.241
	34.748	34.263	33.784	33.312	32.846	32.387	31.934	31.488	31.048	30.614
	38.074	37.542	37.017	36.500	35.990	35.487	34.991	34.502	34.020	33.544
MAA(1)	2900.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
MAA(2)	300.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
MAA(3)	400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
MAA(4)	500.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
MAI(1)	2500.000	2434.489	2403.725	2390.141	2379.838	2377.760	2376.491	2375.716	2375.241	2375.173
	2375.127	2086.940	1723.426	1501.706	1323.673	1173.784	1046.372	938.372	840.372	756.636
	681.798	617.810	562.912	515.670	474.910	439.660	409.115	382.598	357.149	335.261
MAI(2)	300.000	162.819	74.188	28.138	8.954	5.336	3.173	1.885	1.119	.664
	.394	.329	.279	.241	.211	.185	.163	.144	.127	.112
	.099	.087	.077	.069	.061	.055	.049	.043	.039	.034
MAI(3)	400.000	205.548	90.240	33.309	10.342	5.978	3.450	1.989	1.146	.660
	.380	.329	.282	.248	.218	.192	.172	.156	.141	.127
	.042	.037	.032	.028	.024	.021	.018	.016	.013	.012
MAI(4)	500.000	484.033	476.486	473.133	470.746	470.262	469.965	469.782	469.669	469.646
	469.630	411.405	367.030	334.150	308.809	287.546	269.600	251.370	239.683	227.141
	215.313	205.177	196.455	188.919	182.385	176.701	171.742	167.403	162.297	157.826
MAD(1)	65.511	30.764	13.584	10.303	2.078	1.268	.775	.475	.268	.046
	366.188	285.514	221.720	178.033	149.887	127.058	108.355	98.000	83.736	74.838
	63.987	54.898	47.242	40.760	35.249	30.545	26.517	23.449	21.888	18.851
MAD(2)	137.181	88.630	46.050	19.185	3.618	2.163	1.289	.766	.455	.270
	.064	.050	.036	.030	.026	.022	.019	.017	.015	.013
	.011	.010	.009	.008	.007	.006	.005	.005	.004	.004
MAD(3)	194.452	115.308	56.931	22.967	4.364	2.528	1.461	.843	.486	.280
	.131	.087	.057	.032	.011	.010	.009	.008	.007	.006
	.005	.005	.004	.004	.003	.003	.002	.002	.002	.002
MAD(4)	15.967	7.547	3.353	2.388	.483	.297	.183	.113	.023	.016
	58.225	44.375	32.881	25.341	21.262	17.946	15.230	12.541	11.829	11.029
	10.135	8.722	7.536	6.534	5.684	4.959	4.339	3.807	3.471	3.129
SMELR	2000.000	1990.866	1985.921	1983.593	1982.245	1981.971	1981.806	1981.706	1981.646	1981.646
	1981.444	1979.210	1977.244	1975.524	1974.064	1972.824	1971.824	1971.024	1970.424	1969.924

MSHELK	1495.302	1464.648	1437.674	1413.896	1392.902	1374.341	1357.908	1343.342	1325.821	1310.256
	9.134	4.945	2.328	1.348	.273	.165	.100	.060	0.000	0.000
	49.427	58.973	64.252	61.470	53.468	46.623	40.746	40.735	35.748	34.902
	30.654	26.975	23.778	20.993	18.562	16.433	14.566	17.521	15.564	13.842
MAF	25.689	10.666	3.798	.659	.491	.291	.173	.102	.061	.036
	206.345	171.019	143.525	125.225	105.171	90.855	74.760	68.482	59.217	51.333
	44.312	38.333	33.223	28.842	25.073	21.424	18.017	16.585	14.256	12.257
MF	65.689	50.107	42.687	39.005	38.301	37.573	36.933	36.349	35.801	35.277
	241.093	205.282	177.308	155.537	138.017	123.242	110.694	99.970	90.265	89.946
	82.386	75.875	70.241	65.342	61.063	57.311	54.007	51.087	48.275	45.801
FEB4	1.990	4.638	7.692	11.792	14.531	17.430	20.470	23.645	26.955	30.404
	18.761	9.254	2.305	-2.601	-5.806	-7.724	-9.297	-10.331	-11.080	-11.034
	-10.756	-10.250	-9.517	-8.563	-7.392	-6.010	-4.424	-2.218	.809	4.617
CHF	98.366	175.557	242.398	306.026	365.246	423.716	481.517	538.711	595.345	651.453
	762.848	867.077	965.095	1057.585	1145.199	1228.493	1307.948	1387.382	1453.507	1524.383
	1042.495	1127.978	1211.081	1297.009	1370.549	1448.061	1523.491	1587.779	1653.289	1720.166
CMF	65.689	115.796	169.483	197.488	235.789	273.362	310.295	346.645	382.446	417.723
	658.816	864.097	1041.406	1196.943	1334.959	1458.201	1568.895	1668.864	1759.129	1849.075
	1931.462	2007.337	2077.578	2142.919	2203.983	2261.594	2315.301	2366.388	2414.664	2460.466
CHAF	38.366	56.037	63.829	68.873	69.963	70.761	71.346	71.774	72.088	72.318
	128.271	177.589	221.149	256.673	293.776	323.998	350.805	378.013	402.229	423.861
	443.083	460.278	475.639	486.367	501.644	512.627	522.457	534.669	545.623	555.451
CKAF	25.689	36.355	40.153	40.811	41.302	41.593	41.766	41.868	41.929	41.965
	248.310	419.329	562.854	685.079	790.250	881.104	959.864	1028.346	1087.563	1138.895
	1183.207	1221.541	1254.764	1283.606	1308.679	1330.504	1349.520	1366.105	1380.361	1392.618